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NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 Jan 25 BLAST(R) searching in REGISTRY available in STN on the Web
NEWS 3 Jan 29 FSTA has been reloaded and moves to weekly updates
NEWS 4 Feb 01 DKILIT now produced by FIZ Karlsruhe and has a new update
frequency
NEWS 5 Feb 19 Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 6 Mar 08 Gene Names now available in BIOSIS
NEWS 7 Mar 22 TOXLIT no longer available
NEWS 8 Mar 22 TRCTHERMO no longer available
NEWS 9 Mar 28 US Provisional Priorities searched with P in CA/CAplus
and USPATFULL
NEWS 10 Mar 28 LIPINSKI/CALC added for property searching in REGISTRY
NEWS 11 Apr 02 PAPERCHEM no longer available on STN. Use PAPERCHEM2 instead.
NEWS 12 Apr 08 "Ask CAS" for self-help around the clock
NEWS 13 Apr 09 BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 14 Apr 09 ZDB will be removed from STN
NEWS 15 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 16 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 17 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 18 Apr 22 Federal Research in Progress (FEDRIP) now available

NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0d,
CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

********** STN Columbus **********

FILE 'HOME' ENTERED AT 12:48:41 ON 24 MAY 2002

=> file registry

COST IN U.S. DOLLARS	ENTRY	SINCE FILE SESSION	TOTAL
FULL ESTIMATED COST		0.42	0.42

FILE 'REGISTRY' ENTERED AT 12:49:49 ON 24 MAY 2002
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STRUCTURE FILE UPDATES: 22 MAY 2002 HIGHEST RN 420781-77-7
DICTIONARY FILE UPDATES: 22 MAY 2002 HIGHEST RN 420781-77-7

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> E "SPOIIIE"/CN 25
E1 1 SPOIID (FUSOBACTERIUM NUCLEATUM NUCLEATUM STRAIN ATCC25586 GENE FN0806)/CN
E2 1 SPOIID-LIKE DOMAIN CONTAINING PROTEIN; PEPTIDOGLYCAN-BINDING DOMAIN (CLOSTRIDIUM ACETOBUTYLICUM STRAIN ATCC 824 GENE CAC2506)/CN
E3 0 --> SPOIIIE/CN
E4 1 SPOIIIE-FAMILY MEMBRANE PROTEIN (MYCOBACTERIUM LEPRAE STRAIN TN GENE ML1541)/CN
E5 1 SPOIIIJ FAMILY PROTEIN (STREPTOCOCCUS PNEUMONIAE STRAIN TIGR4 GENE SP1975)/CN
E6 1 SPOIIIJ FAMILY PROTEIN (STREPTOCOCCUS PNEUMONIAE STRAIN TIGR4 GENE SP2041)/CN
E7 1 SPOIIIJ-ASSOCIATED PROTEIN (BACILLUS HALODURANS STRAIN C-125 GENE JAG)/CN
E8 1 SPOIIIJ-ASSOCIATED PROTEIN (BACILLUS SUBTILIS GENE JAG)/CN
E9 1 SPOIIIJ-ASSOCIATED PROTEIN (CLOSTRIDIUM PERFRINGENS STRAIN 13 GENE JAG)/CN
E10 1 SPOIIIJ-ASSOCIATED PROTEIN (JAG) (BORRELIA BURGDORFERI STRAIN B31 GENE BB0443)/CN
E11 1 SPOIIIJ-ASSOCIATED PROTEIN (JAG) (TREPONEMA PALLIDUM GENE TP0948)/CN
E12 1 SPOIIIJ-LIKE PROTEIN (STREPTOMYCES COELICOLOR STRAIN A3(2)M145 ORF431)/CN
E13 1 SPOIVB PEPTIDASE/CN
E14 1 SPOIVB PROTEINASE/CN
E15 1 SPOIVB SERINE PEPTIDASE/CN
E16 1 SPOLACID/CN
E17 1 SPOLAMID/CN
E18 1 SPOLAMID ZP/CN
E19 1 SPOLAPON AOS/CN
E20 1 SPOLAPREN SN/CN
E21 1 SPOLAPREN X/CN
E22 1 SPOLAPRET/CN
E23 1 SPOLAPRET CS/CN
E24 1 SPOLAPRET OS/CN
E25 1 SPOLARIN/CN

=> S E4

L1 1 "SPOIIIE-FAMILY MEMBRANE PROTEIN (MYCOBACTERIUM LEPRAE STRAIN TN GENE ML1541)"/CN

=> DIS L1 1 SQIDE
THE ESTIMATED COST FOR THIS REQUEST IS 5.53 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 327136-96-9 REGISTRY
CN **SpoIIIE-family membrane protein (Mycobacterium leprae strain TN gene ML1541) (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN GenBank AL583922-derived protein GI 13093363
FS PROTEIN SEQUENCE
SQL 1345

SEQ 1 MIGVVVIGLV GGMVAMTFAS GSRVFGGAGS IFPLFMIGGV AMMMFSGRMG
51 GQQQMSRPKL DAMRAQFMLM LDMLREAANE SADSMDANYR WFHPAPTTLA
101 AAVGSSRMWE RKPDGKDLNF CVVRVGVGMT RPEVTWGEPQ NMPTDIELEP
151 VTGKALQEFG RYQSIVYNLP KMVSLLVEPW YALIGDREQT LGLMRSIICQ
201 LTFSHGPDHV QMVVVSSDLE QWDWVKWLPH FGDPRRQDAA GNARMVYSSV
251 REFATEQAEL FAGRGSFTPR HASSSAQTPT PHHLIVADVV DPEWEYVISV
301 EGIDGVTFFD LTGSSMWTVV PKRTLRFDEK GVIDALPRDR DTWMVIDDKP
351 WFFALADQLS FAEAEEFAQK LAHWRPAEAY EEIGQRVAHI GARDILSYYG
401 IGDPSAIDFD ALWNSRTDAM GKSRLRVPFG NRSDNGELLF LDMKSLDEGG
451 DGPHGVMSGT TGSGKSTLVR TVIESLMLAH PPEELQFVLA DLKGGSAVKP
501 FAGVPHVSRI ITDLEEDQVL MERFLDALWG EIARRKAVCD NAGVDDAKEY
551 NSVRTRMRAR GQDMPALPML VVVIDEFYEW FRIVPTAVDV LDSIGRQGRA
601 YWIHLMMASQ TIESRAEKLM ENMGYRLVLK ARTAGAAQAA GVPNAVNLPA
651 QAGLGYFRKS LEDVIRFQAE FLWRDYFRGV TLDGEEQPVL VHNIDYVRPQ
701 LFTNLFTPLE VSVGGPEVDA EAVFANAQEF DEEIAEEEAE GGVRTPKIGT
751 VIIDQLRRID FEPYRLWQPP LTQPVAIDDL VNRFLGHPWQ KDYGSARNLV
801 FPIGVIDRPF KHDQPAWTVD TSGPGSNVLV LGAGGSGKTT ALQTIICSAA
851 LTHTPEQVQF YCLGYSGTAL TTVAHLPHVG EVAGPTDPYG VRRTVAELLA
901 LVRDRKRSFL EHGIASMEVF RRRKFGGELG PVPNDGFGDV YLVIDNYRAL
951 VEENEVLIEQ VNQIINQGPS FGVHVVVTAD RESELRPQVR SGFGSRVELR
1001 LAAVEDAKLV RSRFAKDVPV QSGRGMVAVN YVRLDSDPQA GLHTLVARPA
1051 LANTPANVFE SDSVVAPVSR LTSAQAPPVR RLPARFGMEQ VRERAVRDTR
1101 QGVGVGGIAW AISELDLQPV YLNFAENAHL MITGRRECGR TTVLATIMSE
1151 IGRLYAPGGT SAPPTSERSA QVWLIDPRRQ LLTMLGSNYM EKFAYNLDGV
1201 SAMVGELAAL LASREPPPDL SAEELLSRSW WSGPEIFLII DDIQQLPPSF
1251 DSPLQKVVPW VTRAGDVGLH VIATRTFGGW SSAGSDPMLR ALHQANAPLL
1301 VMDADPDEGF IRGKMKGGPL PRGRGLLMAE DTGVLVQVAE TDMRR
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> E "SPOOJ"/CN 25
E1 1 SPONTO N 723/CN
E2 1 SPONTOX/CN
E3 0 --> SPOOJ/CN
E4 1 SPOOJ REGULATOR (SOJ) (TREPONEMA PALLIDUM GENE TP0272)/CN
E5 1 SPOOJ REGULATOR, SOJ/PARA FAMILY (CLOSTRIDIUM ACETOBUTYLICUM STRAIN ATCC 824 GENE CAP0177)/CN
E6 1 SPOOM-RELATED PROTEIN (VIBRIO CHOLERAE STRAIN N16961 GENE VC0039)/CN
E7 1 SPOP-BL/CN
E8 1 SPOPHYLLIN RETARD/CN
E9 1 SPOR(1,3-DITHIOLANE-2,3'-TRICYCLO(2.2.1.02,6)HEPTANE)/CN
E10 1 SPOR-KLENZ/CN
E11 1 SPORACURACIN A/CN
E12 1 SPORACURACIN B/CN
E13 1 SPORAMIN/CN
E14 1 SPORAMIN (IPOMOEA BATABAS STRAIN TAINONG 57 PRECURSOR)/CN
E15 1 SPORAMIN (PHARMACEUTICAL)/CN
E16 1 SPORAMIN (SWEET POTATO CLONE PGEM-TIA GENE SPTI-1 PRECURSOR)/CN
E17 1 SPORAMIN (SWEET POTATO CLONE PGEM-TIA PRECURSOR)/CN
E18 1 SPORAMIN (SWEET POTATO)/CN
E19 1 SPORAMIN A (SWEET POTATO CLONE GSPO-A1 REDUCED)/CN
E20 1 SPORAMIN A (SWEET POTATO CLONE PIMO23 REDUCED)/CN
E21 1 SPORAMIN A (SWEET POTATO STRAIN NANSHU-88)/CN
E22 1 SPORAMIN A 2 (SWEET POTATO CLONE PIMO335 REDUCED)/CN
E23 1 SPORAMIN A 2, PREPRO- (SWEET POTATO CLONE PIMO335 REDUCED)/CN
E24 1 SPORAMIN A 2, PRO- (SWEET POTATO CLONE PIMO335 REDUCED)/CN
E25 1 SPORAMIN A, PREPRO- (SWEET POTATO CLONE GSPO-A1 REDUCED)/CN

=> S E4
L2 1 "SPOOJ REGULATOR (SOJ) (TREPONEMA PALLIDUM GENE TP0272)"/CN

=> DIS L2 1 SQIDE
THE ESTIMATED COST FOR THIS REQUEST IS 5.53 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 209603-85-0 REGISTRY
CN **SpoOJ regulator (soj) (Treponema pallidum gene TP0272) (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN GenBank AE001208-derived protein GI 3322545
FS PROTEIN SEQUENCE
SQL 253

SEQ 1 MGKTLVFVNQ KGGVGKTTSA INLGAYLALA GKKTLLVDFD PQGNMSSGLG
51 LARGLTVYDL LAGKAHINSV LRTTPVHNLF AIPASIDLSG ATVELVDEQD
101 RELYLKKILA EVKDTYDFIL IDCPPSLGIL TLNGLAAANE VFIPLQCEYF
151 ALEGLTLLLQ TVKRVQSGLN TALSIGGIFF

```
TMYDTRTKLA QEVVKQVTTY
    201 FGDKVFNTII PRNVKLSEAP SHGLPISSYD
AQCAGARSYE KLAREIVARD
    251 GQR
MF  Unspecified
CI  MAN
SR  CA
LC  STN Files:  CA, CAPLUS
        1 REFERENCES IN FILE CA (1967 TO DATE)
        1 REFERENCES IN FILE CAPLUS (1967 TO DATE)


=> INDEX BIOSCIENCE
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS                SINCE FILE    TOTAL
                                    ENTRY  SESSION
FULL ESTIMATED COST                    21.72    22.14

INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA,
ANABSTR, AQUASCI,
    BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS,
BIOTECHDS, BIOTECHNO, CABA,
    CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI,
CROPB, CROPU, DDFB,
    DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...'
ENTERED AT 12:53:52 ON 24 MAY 2002

61 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view
search error messages that display as 0* with SET DETAIL OFF.

=> S SPOIIIE
      1  FILE AQUASCI
     47  FILE BIOSIS
      6  FILE BIOTECHABS
      6  FILE BIOTECHDS
     28  FILE BIOTECHNO
      1  FILE CABA
     50  FILE CAPLUS
      1  FILE CEABA-VTB
      1  FILE CONFSCI
 20 FILES SEARCHED...
      6  FILE DGENE
     30  FILE EMBASE
     23  FILE ESBIOBASE
      3  FILE FSTA
     54  FILE GENBANK
      8  FILE IFIPAT
      5  FILE JICST-EPLUS
     34  FILE LIFESCI
     37  FILE MEDLINE
      9  FILE PASCAL
 51 FILES SEARCHED...
      2  FILE PROMT
     34  FILE SCISEARCH
      8  FILE TOXCENTER
     17  FILE USPATFULL
      5  FILE WPIDS
      5  FILE WPINDEX

 25 FILES HAVE ONE OR MORE ANSWERS,  61 FILES
SEARCHED IN STNINDEX

L3  QUE SPOIIIE

=> D RANK
F1      54  GENBANK
F2      50  CAPLUS
F3      47  BIOSIS
F4      37  MEDLINE
F5      34  LIFESCI
F6      34  SCISEARCH
F7      30  EMBASE
F8      28  BIOTECHNO
F9      23  ESBIOBASE
F10     17  USPATFULL
F11      9  PASCAL
F12      8  IFIPAT
F13      8  TOXCENTER
F14      6  BIOTECHABS
F15      6  BIOTECHDS
F16      6  DGENE
F17      5  JICST-EPLUS
F18      5  WPIDS
F19      5  WPINDEX
F20      3  FSTA
F21      2  PROMT
F22      1  AQUASCI
F23      1  CABA
F24      1  CEABA-VTB
F25      1  CONFSCI


=> S SPOOJ
     27  FILE BIOSIS
      4  FILE BIOTECHABS
      4  FILE BIOTECHDS
     16  FILE BIOTECHNO
      1  FILE CABA
     19  FILE CAPLUS
     15  FILE EMBASE
     10  FILE ESBIOBASE
      1  FILE FEDRIP
      1  FILE FSTA
     11  FILE GENBANK
      2  FILE IFIPAT
      1  FILE JICST-EPLUS
     13  FILE LIFESCI
     10  FILE MEDLINE
 48 FILES SEARCHED...
      2  FILE PASCAL
     13  FILE SCISEARCH
      8  FILE TOXCENTER
      9  FILE USPATFULL
      2  FILE WPIDS
      2  FILE WPINDEX

 21 FILES HAVE ONE OR MORE ANSWERS,  61 FILES
SEARCHED IN STNINDEX

L4  QUE SPOOJ

=> FILE RANK
'RANK' IS NOT A VALID FILE NAME
SESSION CONTINUES IN INDEX FILES 'ADISALERTS,
ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR,
AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS,
BIOTECHABS, BIOTECHDS, BIOTECHNO,
CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI,
CROPB, CROPU, DDFB, DDFU,
DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, DRUGNL,
DRUGU, DRUGUPDATES, EMBAL, EMBASE,
ESBIOBASE, FEDRIP, FOMAD, FOREGE, FROSTI, FSTA,
GENBANK, HEALSAFE, IFIPAT,
JICST-EPLUS, KOSMET, LIFESCI, MEDICONF, MEDLINE,
NIOSHTIC, NTIS, OCEAN, PASCAL,
PHAR, PHIC, PHIN, PROMT, SCISEARCH, SYNTHLINE,
TOXCENTER, USPATFULL, USPAT2,
WPIDS, WPINDEX'
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files
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accessing the remaining file names entered.

=> D RANK
F1      27  BIOSIS
F2      19  CAPLUS
```

F3 16 BIOTECHNO
F4 15 EMBASE
F5 13 LIFESCI
F6 13 SCISEARCH
F7 11 GENBANK
F8 10 ESBIOBASE
F9 10 MEDLINE
F10 9 USPATFULL
F11 8 TOXCENTER
F12 4 BIOTECHABS
F13 4 BIOTECHDS
F14 2 IFIPAT
F15 2 PASCAL
F16 2 WPIDS
F17 2 WPINDEX
F18 1 CABA
F19 1 FEDRIP
F20 1 FSTA
F21 1 JICST-EPLUS

=> FILE BIOSIS CAPLUS
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 1.59 23.73

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=> S SPOIIIE
L5 97 SPOIIIE

=> S SPOOJ
L6 46 SPOOJ

=> S L5 AND L6
L7 3 L5 AND L6

=> DUP REM L7
PROCESSING COMPLETED FOR L7
L8 3 DUP REM L7 (0 DUPLICATES REMOVED)

=> D TI SO 1-3

L8 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Bacillus strain and antibiotic screening method.
SO Official Gazette of the United States Patent and Trademark Office Patents,
(Feb. 26, 2002) Vol. 1255, No. 4, pp. No Pagination.
http://www.uspto.gov/web/menu/patdata.html. e-file.
ISSN: 0098-1133.

L8 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Synthetic lethal phenotypes caused by mutations affecting chromosome
partitioning in Bacillus subtilis
SO Journal of Bacteriology (1999), 181(18), 5860-5864
CODEN: JOBAAY; ISSN: 0021-9193

L8 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Mutant Bacillus strain and antibiotic screening method
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2

=> D IBIB AB 2

L8 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:616178 CAPLUS
DOCUMENT NUMBER: 132:920
TITLE: Synthetic lethal phenotypes caused by mutations affecting chromosome partitioning in Bacillus subtilis
AUTHOR(S): Britton, Robert A.; Grossman, Alan D.
CORPORATE SOURCE: Department of Biology, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SOURCE: Journal of Bacteriology (1999), 181(18), 5860-5864
CODEN: JOBAAY; ISSN: 0021-9193
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We investigated the genetic interactions between mutations affecting chromosome structure and partitioning in Bacillus subtilis. Loss-of-function mutations in **spoIIIE** (encoding a putative DNA translocase) and smc (involved in chromosome structure and partitioning) caused a synthetic lethal phenotype. We constructed a conditional mutation in smc and found that many of the **spoIIIE** smc double-mutant cells had a chromosome bisected by a division septum. The growth defect of the double mutant was exacerbated by a null mutation in the chromosome partitioning gene spo0J. These results suggest that mutants defective in nucleoid structure are unable to move chromosomes out of the way of the invaginating septum and that **SpoIIIE** is involved in repositioning these bisected chromosomes during vegetative growth.
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D HIS

(FILE 'HOME' ENTERED AT 12:48:41 ON 24 MAY 2002)

FILE 'REGISTRY' ENTERED AT 12:49:49 ON 24 MAY 2002
E "SPOIIIE"/CN 25
L1 1 S E4
E "SPOOJ"/CN 25
L2 1 S E4

INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 12:53:52 ON 24 MAY 2002
SEA SPOIIIE
---
1 FILE AQUASCI
47 FILE BIOSIS
6 FILE BIOTECHABS
6 FILE BIOTECHDS
28 FILE BIOTECHNO
1 FILE CABA
50 FILE CAPLUS
1 FILE CEABA-VTB
1 FILE CONFSCI
6 FILE DGENE
30 FILE EMBASE
23 FILE ESBIOBASE
3 FILE FSTA

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        54  FILE GENBANK
         8  FILE IFIPAT
         5  FILE JICST-EPLUS
        34  FILE LIFESCI
        37  FILE MEDLINE
         9  FILE PASCAL
         2  FILE PROMT
        34  FILE SCISEARCH
         8  FILE TOXCENTER
        17  FILE USPATFULL
         5  FILE WPIDS
         5  FILE WPINDEX
L3          QUE SPOIIIE
         ---------
          SEA SPOOJ
         ---------
        27  FILE BIOSIS
         4  FILE BIOTECHABS
         4  FILE BIOTECHDS
        16  FILE BIOTECHNO
         1  FILE CABA
        19  FILE CAPLUS
        15  FILE EMBASE
        10  FILE ESBIOBASE
         1  FILE FEDRIP
         1  FILE FSTA
        11  FILE GENBANK
         2  FILE IFIPAT
         1  FILE JICST-EPLUS
        13  FILE LIFESCI
        10  FILE MEDLINE
         2  FILE PASCAL
        13  FILE SCISEARCH
         8  FILE TOXCENTER
         9  FILE USPATFULL
         2  FILE WPIDS
         2  FILE WPINDEX
L4          QUE SPOOJ
         ---------

   FILE 'BIOSIS, CAPLUS' ENTERED AT 12:55:42 ON 24 MAY
2002
L5        97 S SPOIIIE
L6        46 S SPOOJ
L7         3 S L5 AND L6
L8         3 DUP REM L7 (0 DUPLICATES REMOVED)

=> LOG HOLD
COST IN U.S. DOLLARS                SINCE FILE    TOTAL
                                      ENTRY   SESSION
FULL ESTIMATED COST                    13.14    36.87

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE    TOTAL
                                      ENTRY   SESSION
CA SUBSCRIBER PRICE                    -0.62    -0.62

 SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 12:59:50 ON 24
MAY 2002

Connecting via Winsock to STN



Welcome to STN International!  Enter x:x

LOGINID:SSSPTA1636DXS

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'BIOSIS, CAPLUS' AT 13:26:13 ON 24
MAY 2002
FILE 'BIOSIS' ENTERED AT 13:26:13 ON 24 MAY 2002
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FILE 'CAPLUS' ENTERED AT 13:26:13 ON 24 MAY 2002
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COST IN U.S. DOLLARS                SINCE FILE    TOTAL
                                      ENTRY   SESSION
FULL ESTIMATED COST                    13.14    36.87

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE    TOTAL
                                      ENTRY   SESSION
CA SUBSCRIBER PRICE                    -0.62    -0.62

=> FILE MEDLINE CAPLUS BIOSIS
COST IN U.S. DOLLARS                SINCE FILE    TOTAL
                                      ENTRY   SESSION
FULL ESTIMATED COST                    13.14    36.87

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE    TOTAL
                                      ENTRY   SESSION
CA SUBSCRIBER PRICE                    -0.62    -0.62

FILE 'MEDLINE' ENTERED AT 13:26:26 ON 24 MAY 2002

FILE 'CAPLUS' ENTERED AT 13:26:26 ON 24 MAY 2002
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=> S REPORTER GENE
L9     45878 REPORTER GENE

=> S COMPLEMENTA?
L10    317475 COMPLEMENTA?

=> S L9 AND L10
L11     2166 L9 AND L10

=> S L9(P)L10
L12      822 L9(P) L10

=> S SIGMA FACTOR
L13     6401 SIGMA FACTOR

=> S SIGMA F
L14     2900 SIGMA F

=> S L12 AND L14
L15        0 L12 AND L14

=> DUP REM L12
PROCESSING COMPLETED FOR L12
L16      400 DUP REM L12 (422 DUPLICATES REMOVED)

=> D TI 1-10

L16 ANSWER 1 OF 400  CAPLUS  COPYRIGHT 2002 ACS
TI  Crucifer tobamovirus vector containing internal ribosome entry sites
for
    cap-independent translation of heterologous genes in transgenic
plants

L16 ANSWER 2 OF 400  CAPLUS  COPYRIGHT 2002 ACS
TI  Rat and human genes for a novel mammalian biogenic amine
receptor and
    their use in the development of therapeutics

L16 ANSWER 3 OF 400  CAPLUS  COPYRIGHT 2002 ACS
TI  PCR primers for construction of transcription template for dilution
```

batch-type cell-free protein synthesis system

L16 ANSWER 4 OF 400 CAPLUS COPYRIGHT 2002 ACS
TI The promoter of Ls (Lateral suppressor) gene of tomato regulating side-shoot, petal and abscission zone formation and its use in development of new plant varieties

L16 ANSWER 5 OF 400 CAPLUS COPYRIGHT 2002 ACS
TI Nucleic acid libraries in adenoviral-derived gene expression vectors and their use for high throughput screening and functional genomics

L16 ANSWER 6 OF 400 CAPLUS COPYRIGHT 2002 ACS
TI Targeted inhibition of gene expression with double-stranded RNA with single-stranded ends

L16 ANSWER 7 OF 400 MEDLINE DUPLICATE 1
TI Transcriptionally active polymerase chain reaction (TAP): high throughput gene expression using genome sequence data.

L16 ANSWER 8 OF 400 MEDLINE DUPLICATE 2
TI Pseudomonas aeruginosa displays multiple phenotypes during development as a biofilm.

L16 ANSWER 9 OF 400 MEDLINE DUPLICATE 3
TI Characterization of the norB gene, encoding nitric oxide reductase, in the nondenitrifying cyanobacterium Synechocystis sp. strain PCC6803.

L16 ANSWER 10 OF 400 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Smooth muscle-specific transcription without a CArG box element.

=> FILE REGISTRY
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 17.91 54.78

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE TOTAL
ENTRY SESSION
CA SUBSCRIBER PRICE 0.00 -0.62

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STRUCTURE FILE UPDATES: 22 MAY 2002 HIGHEST RN 420781-77-7
DICTIONARY FILE UPDATES: 22 MAY 2002 HIGHEST RN 420781-77-7

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

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Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> E "PROKARYOTE"/CN 25
E1 1 PROKAOLINITE/CN
E2 1 PROKARBOL/CN
E3 0 --> PROKARYOTE/CN
E4 1 PROKARYOTIC LEADER PEPTIDASE/CN
E5 1 PROKARYOTIC SIGNAL PEPTIDASE/CN
E6 1 PROKARYOTIC SIGNAL PROTEINASE/CN
E7 1 PROKARYOTIC TELOMERASE/CN
E8 1 PROKARYOTIC TYPE I SIGNAL PEPTIDASE (AGROBACTERIUM TUMEFACIENS STRAIN C58 GENE SIPF)/CN
E9 1 PROKAYVIT/CN
E10 1 PROKAYVIT ORAL/CN
E11 1 PROKETAZINE/CN
E12 1 PROKETAZINE MALEATE/CN
E13 1 PROKEXIN/CN
E14 1 PROKHINOR/CN
E15 1 PROKHINOR 2558/CN
E16 1 PROKHINOR 2948/CN
E17 1 PROKHINOR GR 77/CN
E18 1 PROKINE/CN
E19 1 PROKINETICIN 1 (HUMAN GENE PROK1 PRECURSOR)/CN
E20 1 PROKINETICIN 2 (HUMAN GENE PROK2 PRECURSOR)/CN
E21 1 PROKLAMILIN/CN
E22 1 PROKRON 1/CN
E23 1 PROKRON 10/CN
E24 1 PROKRON 10L/CN
E25 1 PROKRON 11/CN

=> E "BACTERIUM"/CN 25
E1 1 BACTERIOVIRIDIN/CN
E2 1 BACTERIOVIRIDINE/CN
E3 0 --> BACTERIUM/CN
E4 1 BACTERIUM ACIDOPHILUM/CN
E5 1 BACTERIUM BULGARICUM/CN
E6 1 BACTERIUM COLI/CN
E7 1 BACTERIUM PRODIGIOSUM/CN
E8 1 BACTERIUM PYOCYANEUM/CN
E9 1 BACTERIUM SUBTILIS/CN
E10 1 BACTERIUM SUIPESTIFER/CN
E11 1 BACTERIUM TABACUM/CN
E12 1 BACTEROCIN TRANSPORT ACCESSORY PROTEIN (STREPTOCOCCUS PNEUMONIAE STRAIN TIGR4 GENE SP1499)/CN
E13 1 BACTEROID DEVELOPMENT PROTEIN (AGROBACTERIUM TUMEFACIENS STRAIN C58 GENE BACA)/CN
E14 1 BACTEROID DEVELOPMENT PROTEIN BACA (BRUCELLA MELITENSIS STRAIN 16M GENE BME11553)/CN
E15 1 BACTEROIDES GINGIVALIS SERINE PROTEINASE/CN
E16 1 BACTEROIDES NODOSUS SERINE PROTEINASE/CN
E17 1 BACTERON B 6/CN
E18 1 BACTEROPLANECIN/CN
E19 1 BACTESID/CN
E20 1 BACTI-STAT SOAP/CN
E21 1 BACTIFLUDRON/CN
E22 1 BACTIFOLISTOP/CN
E23 1 BACTIFOLISTOP L/CN
E24 1 BACTIGRAS/CN
E25 1 BACTIL SC/CN

=> FILE MEDLINE BIOSIS CAPLUS
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 0.76 55.54

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE TOTAL
ENTRY SESSION
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FILE 'MEDLINE' ENTERED AT 13:33:15 ON 24 MAY 2002

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=> S L16
L17 400 L16

=> S SUBTILIS
L18 70987 SUBTILIS

=> S L17 AND L18
L19 4 L17 AND L18

=> D TI 1-4

L19 ANSWER 1 OF 4 MEDLINE
TI A Bacillus **subtilis** gene induced by cold shock encodes a membrane phospholipid desaturase.

L19 ANSWER 2 OF 4 MEDLINE
TI Regulation of the Bacillus **subtilis** pyrimidine biosynthetic (pyr) gene cluster by an autogenous transcriptional attenuation mechanism.

L19 ANSWER 3 OF 4 MEDLINE
TI Shuttle vectors containing a multiple cloning site and a lacZ alpha gene
for conjugal transfer of DNA from Escherichia coli to gram-positive bacteria.

L19 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS
TI The aarC gene involved in the regulation of 2'-N-acetyltransferase activity in Providencia and its use in screening for novel antimicrobial
agents

=> D TI SO 1-4

L19 ANSWER 1 OF 4 MEDLINE
TI A Bacillus **subtilis** gene induced by cold shock encodes a membrane phospholipid desaturase.
SO JOURNAL OF BACTERIOLOGY, (1998 Apr) 180 (8) 2194-200.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L19 ANSWER 2 OF 4 MEDLINE
TI Regulation of the Bacillus **subtilis** pyrimidine biosynthetic (pyr) gene cluster by an autogenous transcriptional attenuation mechanism.
SO JOURNAL OF BACTERIOLOGY, (1994 Jun) 176 (12) 3708-22.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L19 ANSWER 3 OF 4 MEDLINE
TI Shuttle vectors containing a multiple cloning site and a lacZ alpha gene
for conjugal transfer of DNA from Escherichia coli to gram-positive bacteria.
SO GENE, (1991 Jun 15) 102 (1) 99-104.
Journal code: FOP; 7706761. ISSN: 0378-1119.

L19 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS
TI The aarC gene involved in the regulation of 2'-N-acetyltransferase activity in Providencia and its use in screening for novel antimicrobial
agents
SO PCT Int. Appl., 86 pp.
CODEN: PIXXD2

=> D IBIB AB 2-4

L19 ANSWER 2 OF 4 MEDLINE
ACCESSION NUMBER: 94266724 MEDLINE
DOCUMENT NUMBER: 94266724 PubMed ID: 8206849
TITLE: Regulation of the Bacillus **subtilis** pyrimidine biosynthetic (pyr) gene cluster by an autogenous transcriptional attenuation mechanism.
AUTHOR: Turner R J; Lu Y; Switzer R L
CORPORATE SOURCE: Department of Biochemistry, University of Illinois, Urbana
61801.
CONTRACT NUMBER: GM47112 (NIGMS)
SOURCE: JOURNAL OF BACTERIOLOGY, (1994 Jun) 176 (12) 3708-22.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-M59757
ENTRY MONTH: 199407
ENTRY DATE: Entered STN: 19940721
Last Updated on STN: 19940721
Entered Medline: 19940714
AB A complete transcript of the Bacillus **subtilis** pyr operon contains the following elements in 5' to 3' order: a 151-nucleotide (nt) untranslated leader; pyrR, encoding a 20-kDa protein; a 173-nt intercistronic region; pyrP, encoding a 46-kDa protein; a 145-nt intercistronic region; and eight overlapping cistrons encoding all of the six enzymes for de novo pyrimidine biosynthesis. Transcription is controlled by the availability of pyrimidines via an attenuation mechanism. There are three transcription terminators within the operon, each of which is preceded by another stem-loop structure, the antiterminator, whose formation would prevent formation of the terminator stem-loop. These are located in the leader, the pyrR-pyrP intercistronic region, and the pyrP-pyrB intercistronic region. Northern (RNA) blot analysis has identified transcripts of lengths which coincide with termination at these proposed attenuation sites and whose relative abundances vary in the expected pyrimidine-dependent manner. Each antiterminator contains a 50-base conserved sequence in its promoter-proximal half. Various transcriptional fusions of the pyr promoter and surrounding sequences to promoterless **reporter genes** support an attenuation mechanism whereby when pyrimidines are abundant, the PyrR protein binds to the conserved sequence in the pyr mRNA and disrupts the antiterminator, permitting terminator hairpin formation and promoting transcription termination. Deletion of pyrR from the chromosome resulted in the constitutive, elevated expression of aspartate transcarbamylase, which is encoded by pyrB, the third gene in the operon. **Complementation** of an E. coli upp mutant, as well as direct enzymatic assay, has demonstrated that pyrR also confers uracil phosphoribosyltransferase activity. Analysis of pyrR and upp deletion mutants demonstrated that upp, not pyrR, encodes the quantitatively important uracil phosphoribosyltransferase activity. The pyrP gene probably encodes an integral membrane uracil permease.

L19 ANSWER 3 OF 4 MEDLINE
ACCESSION NUMBER: 91323739 MEDLINE
DOCUMENT NUMBER: 91323739 PubMed ID: 1864514
TITLE: Shuttle vectors containing a multiple cloning site and a lacZ alpha gene for conjugal transfer of DNA from Escherichia coli to gram-positive bacteria.
AUTHOR: Trieu-Cuot P; Carlier C; Poyart-Salmeron C; Courvalin P

CORPORATE SOURCE: Unite des Agents Antibacteriens, CNRS UA 271, Institut
Pasteur, France.
SOURCE: GENE, (1991 Jun 15) 102 (1) 99-104.
Journal code: FOP; 7706761. ISSN: 0378-1119.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199109
ENTRY DATE: Entered STN: 19910929
Last Updated on STN: 19910929
Entered Medline: 19910909
AB The mobilizable shuttle cloning vectors, pAT18 and pAT19, are composed of:
(i) the replication origins of pUC and of the broad-host-range enterococcal plasmid pAM beta 1; (ii) an erythromycin-resistance-encoding
gene expressed in Gram- and Gram+ bacteria; (iii) the transfer origin of
the IncP plasmid RK2; and (iv) the multiple cloning site and the lacZ alpha **reporter gene** of pUC18 (pAT18) and pUC19
(pAT19). These 6.6-kb plasmids contain ten unique cloning sites that allow
screening of derivatives containing DNA inserts by alpha-**complementation** in Escherichia coli carrying the lacZ delta M15
deletion, and can be efficiently mobilized by self-transferable IncP
plasmids co-resident in the E. coli donors. Plasmids pAT18, pAT19 and
recombinant derivatives have been successfully transferred by conjugation
from E. coli to Bacillus **subtilis**, Bacillus thuringiensis,
Listeria monocytogenes, Enterococcus faecalis, Lactococcus lactis, and
Staphylococcus aureus at frequencies ranging from 10(-6) to 10(-9). The
presence of a restriction system in the recipient dramatically affects (by
three orders of magnitude) the efficiency of conjugal transfer of these vectors from E. coli to Gram+ bacteria.

L19 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:672694 CAPLUS
DOCUMENT NUMBER: 129:272926
TITLE: The aarC gene involved in the regulation of 2'-N-acetyltransferase activity in Providencia and its use in screening for novel antimicrobial agents
INVENTOR(S): Rather, Philip N.
PATENT ASSIGNEE(S): Case Western Reserve University, USA
SOURCE: PCT Int. Appl., 86 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9842875	A1	19981001	WO 1998-US6061	19980327
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5858367	A	19990112	US 1997-827190	19970327
AU 9865890	A1	19981020	AU 1998-65890	19980327
EP 975801	A1	20000202	EP 1998-912092	19980327
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001523097	T2	20011120	JP 1998-546016	19980327
US 6383745	B1	20020507	US 1998-170187	19981013

PRIORITY APPLN. INFO.: US 1997-827190 A 19970327
WO 1998-US6061 W 19980327
AB The aarC gene that plays a role of the regulation of the synthesis of a key enzyme in peptidoglycan biosynthesis, the 2'-N-acetyltransferase encoded by the aac(2')-Ia gene, and that is essential for the viability of
bacteria is cloned and characterized. The gene regulates expression of
the aac(2')-Ia gene in response to cell d. Using a **reporter gene** under control of the aac(2')-Ia promoter can therefore be
used to measure cell growth and the bacteriostatic and antibiotic effects
of test compds. A **reporter gene** system using the
promoter of the aac(2')-Ia gene to measure inhibition of aarC function is
described for use in screening antibiotics. The gene may also be used as
a target in the diagnosis of infection. Cloning of the aarC gene by **complementation** is described.

=> LOG HOLD
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 13.63 69.17

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE TOTAL
ENTRY SESSION
CA SUBSCRIBER PRICE -0.62 -1.24

SESSION WILL BE HELD FOR 60 MINUTES
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SESSION RESUMED IN FILE 'MEDLINE, BIOSIS, CAPLUS' AT 14:03:32 ON 24 MAY 2002
FILE 'MEDLINE' ENTERED AT 14:03:32 ON 24 MAY 2002
FILE 'BIOSIS' ENTERED AT 14:03:32 ON 24 MAY 2002
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ENTRY SESSION
FULL ESTIMATED COST 13.63 69.17

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SINCE FILE TOTAL
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=> D HIS

(FILE 'HOME' ENTERED AT 12:48:41 ON 24 MAY 2002)

FILE 'REGISTRY' ENTERED AT 12:49:49 ON 24 MAY 2002
E "SPOIIIE"/CN 25
L1 1 S E4
E "SPOOJ"/CN 25
L2 1 S E4

INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI,
BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,
CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI,

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CROPB, CROPU, DDFB,
   DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...'
ENTERED AT 12:53:52 ON
   24 MAY 2002
         SEA SPOIIIE
         ---------
         1  FILE AQUASCI
        47  FILE BIOSIS
         6  FILE BIOTECHABS
         6  FILE BIOTECHDS
        28  FILE BIOTECHNO
         1  FILE CABA
        50  FILE CAPLUS
         1  FILE CEABA-VTB
         1  FILE CONFSCI
         6  FILE DGENE
        30  FILE EMBASE
        23  FILE ESBIOBASE
         3  FILE FSTA
        54  FILE GENBANK
         8  FILE IFIPAT
         5  FILE JICST-EPLUS
        34  FILE LIFESCI
        37  FILE MEDLINE
         9  FILE PASCAL
         2  FILE PROMT
        34  FILE SCISEARCH
         8  FILE TOXCENTER
        17  FILE USPATFULL
         5  FILE WPIDS
         5  FILE WPINDEX
L3         QUE SPOIIIE
         ---------
         SEA SPOOJ
         ---------
        27  FILE BIOSIS
         4  FILE BIOTECHABS
         4  FILE BIOTECHDS
        16  FILE BIOTECHNO
         1  FILE CABA
        19  FILE CAPLUS
        15  FILE EMBASE
        10  FILE ESBIOBASE
         1  FILE FEDRIP
         1  FILE FSTA
        11  FILE GENBANK
         2  FILE IFIPAT
         1  FILE JICST-EPLUS
        13  FILE LIFESCI
        10  FILE MEDLINE
         2  FILE PASCAL
        13  FILE SCISEARCH
         8  FILE TOXCENTER
         9  FILE USPATFULL
         2  FILE WPIDS
         2  FILE WPINDEX
L4         QUE SPOOJ
         ---------

   FILE 'BIOSIS, CAPLUS' ENTERED AT 12:55:42 ON 24 MAY
2002
L5        97 S SPOIIIE
L6        46 S SPOOJ
L7         3 S L5 AND L6
L8         3 DUP REM L7 (0 DUPLICATES REMOVED)

   FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 13:26:26 ON
24 MAY 2002
L9     45878 S REPORTER GENE
L10   317475 S COMPLEMENTA?
L11     2166 S L9 AND L10
L12      822 S L9(P)L10
L13     6401 S SIGMA FACTOR
L14     2900 S SIGMA F
L15        0 S L12 AND L14
L16      400 DUP REM L12 (422 DUPLICATES REMOVED)

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         E "PROKARYOTE"/CN 25
         E "BACTERIUM"/CN 25

   FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 13:33:15 ON
24 MAY 2002
L17      400 S L16
L18    70987 S SUBTILIS
L19        4 S L17 AND L18

=> S COMPLEMENT?
L20   556256 COMPLEMENT?

=> S FUNCTION?
L21  3739694 FUNCTION?

=> S L2O(W)L21
L22        0 L2O(W) L21

=> S L20(A)L21
L23     4121 L20(A) L21

=> S L18 AND L23
L24      106 L18 AND L23

=> DUP REM L24
PROCESSING COMPLETED FOR L24
L25       46 DUP REM L24 (60 DUPLICATES REMOVED)

=> D TI 1-10

L25 ANSWER 1 OF 46  CAPLUS  COPYRIGHT 2002 ACS
TI  Hansenula HARO7 gene and encoded chorismate mutase and its use
as a
    selectable marker

L25 ANSWER 2 OF 46  CAPLUS  COPYRIGHT 2002 ACS
TI  Lumazine synthase and riboflavin synthase genes from plants and
    Magnaporthe grisea

L25 ANSWER 3 OF 46  CAPLUS  COPYRIGHT 2002 ACS
TI  Lumazine synthase and riboflavin synthase from plants and fungi

L25 ANSWER 4 OF 46  CAPLUS  COPYRIGHT 2002 ACS
TI  Lumazine synthase and riboflavin synthase and their genes from
plants and
    fungi

L25 ANSWER 5 OF 46    MEDLINE                  DUPLICATE 1
TI  Nitrate assimilation genes of the marine diazotrophic, filamentous
    cyanobacterium Trichodesmium sp. strain WH9601.

L25 ANSWER 6 OF 46    MEDLINE                  DUPLICATE 2
TI  Characterization of OpuA, a glycine-betaine uptake system of
Lactococcus
    lactis.

L25 ANSWER 7 OF 46    MEDLINE                  DUPLICATE 3
TI  Nucleotide sequence, expression and transcriptional analysis of the
    Bifidobacterium longum MB 219 lacZ gene.

L25 ANSWER 8 OF 46    MEDLINE                  DUPLICATE 4
TI  Plant riboflavin biosynthesis. Cloning, chloroplast localization,
    expression, purification, and partial characterization of spinach
lumazine
    synthase.

L25 ANSWER 9 OF 46    MEDLINE                  DUPLICATE 5
TI  Identification and disruption of BetL, a secondary glycine betaine
    transport system linked to the salt tolerance of Listeria
monocytogenes
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LO28.

L25 ANSWER 10 OF 46 MEDLINE DUPLICATE 6
TI Staphylokinase as a plasminogen activator component in recombinant fusion
proteins.

=> S L25 NOT PY>1998
L26 36 L25 NOT PY>1998

=> D TI SO 1-36

L26 ANSWER 1 OF 36 MEDLINE
TI Mutations in Bartonella bacilliformis gyrB confer resistance to coumermycin A1.
SO ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1998 Nov) 42 (11) 2906-13.
Journal code: 6HK; 0315061. ISSN: 0066-4804.

L26 ANSWER 2 OF 36 MEDLINE
TI Basic and acidic regions flanking the HMG domain of maize HMGa modulate
the interactions with DNA and the self-association of the protein.
SO BIOCHEMISTRY, (1998 Feb 24) 37 (8) 2673-81.
Journal code: A0G; 0370623. ISSN: 0006-2960.

L26 ANSWER 3 OF 36 MEDLINE
TI Characterization of Bacillus **subtilis** hemN.
SO JOURNAL OF BACTERIOLOGY, (1997 Nov) 179 (22) 7181-5.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L26 ANSWER 4 OF 36 MEDLINE
TI Synthesis of the osmoprotectant glycine betaine in Bacillus **subtilis**: characterization of the gbsAB genes.
SO JOURNAL OF BACTERIOLOGY, (1996 Sep) 178 (17) 5121-9.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L26 ANSWER 5 OF 36 MEDLINE
TI Three transport systems for the osmoprotectant glycine betaine operate in
Bacillus **subtilis**: characterization of OpuD.
SO JOURNAL OF BACTERIOLOGY, (1996 Sep) 178 (17) 5071-9.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L26 ANSWER 6 OF 36 MEDLINE
TI Cloning and characterization of the yeast HEM14 gene coding for protoporphyrinogen oxidase, the molecular target of diphenyl ether-type
herbicides.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1996 Apr 12) 271 (15) 9120-8.
Journal code: HIV; 2985121R. ISSN: 0021-9258.

L26 ANSWER 7 OF 36 MEDLINE
TI A pAO1-encoded molybdopterin cofactor gene (moaA) of Arthrobacter
nicotinovorans: characterization and site-directed mutagenesis of the encoded protein.
SO ARCHIVES OF MICROBIOLOGY, (1995 Aug) 164 (2) 142-51.
Journal code: 7YN; 0410427. ISSN: 0302-8933.

L26 ANSWER 8 OF 36 MEDLINE
TI Functional analysis of the Bacillus **subtilis** purT gene encoding formate-dependent glycinamide ribonucleotide transformylase.
SO MICROBIOLOGY, (1995 Sep) 141 (Pt 9) 2211-8.
Journal code: BXW; 9430468. ISSN: 1350-0872.

L26 ANSWER 9 OF 36 MEDLINE
TI Functional characterization of the Staphylococcus carnosus SecA protein in
Escherichia coli and Bacillus **subtilis** secA mutant strains.
SO FEMS MICROBIOLOGY LETTERS, (1995 Sep 15) 131 (3) 271-7.
Journal code: FML; 7705721. ISSN: 0378-1097.

L26 ANSWER 10 OF 36 MEDLINE
TI The Saccharomyces cerevisiae RIB4 gene codes for 6,7-dimethyl-8-ribityllumazine synthase involved in riboflavin biosynthesis. Molecular
characterization of the gene and purification of the encoded protein.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1995 Oct 6) 270 (40) 23801-7.
Journal code: HIV; 2985121R. ISSN: 0021-9258.

L26 ANSWER 11 OF 36 MEDLINE
TI A new Bradyrhizobium japonicum gene required for free-living growth and
bacteroid development is conserved in other bacteria and in plants.
SO MOLECULAR PLANT-MICROBE INTERACTIONS, (1995 May-Jun) 8 (3) 454-64.
Journal code: A9P; 9107902. ISSN: 0894-0282.

L26 ANSWER 12 OF 36 MEDLINE
TI Isolation of cDNAs encoding GTP cyclohydrolase II from Arabidopsis
thaliana.
SO GENE, (1995 Jul 28) 160 (2) 303-4.
Journal code: FOP; 7706761. ISSN: 0378-1119.

L26 ANSWER 13 OF 36 MEDLINE
TI OpuA, an osmotically regulated binding protein-dependent transport system
for the osmoprotectant glycine betaine in Bacillus **subtilis**.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1995 Jul 14) 270 (28) 16701-13.
Journal code: HIV; 2985121R. ISSN: 0021-9258.

L26 ANSWER 14 OF 36 MEDLINE
TI Structural comparison of the histidine-containing phosphocarrier protein
HPr.
SO BIOCHEMISTRY AND CELL BIOLOGY, (1994 May-Jun) 72 (5-6) 202-17.
Journal code: ALR; 8606068. ISSN: 0829-8211.

L26 ANSWER 15 OF 36 MEDLINE
TI Riboflavin biosynthesis in Saccharomyces cerevisiae. Cloning, characterization, and expression of the RIB5 gene encoding riboflavin
synthase.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1995 Jan 6) 270 (1) 437-44.
Journal code: HIV; 2985121R. ISSN: 0021-9258.

L26 ANSWER 16 OF 36 MEDLINE
TI Cloning and nucleotide sequence of Pseudomonas aeruginosa DNA gyrase gyrA
gene from strain PAO1 and quinolone-resistant clinical isolates.
SO ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1994 Sep) 38 (9) 1944-52.
Journal code: 6HK; 0315061. ISSN: 0066-4804.

L26 ANSWER 17 OF 36 MEDLINE
TI Clustering and co-transcription of the Bacillus **subtilis** genes encoding the aminoacyl-tRNA synthetases specific for glutamate and for
cysteine and the first enzyme for cysteine biosynthesis.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1994 Mar 11) 269 (10) 7473-82.
Journal code: HIV; 2985121R. ISSN: 0021-9258.

L26 ANSWER 18 OF 36 MEDLINE
TI Genomic scanning for expressed sequences in Xp21 identifies the glycerol
kinase gene.
SO NATURE GENETICS, (1993 Aug) 4 (4) 367-72.
Journal code: BRO; 9216904. ISSN: 1061-4036.

L26 ANSWER 19 OF 36 MEDLINE
TI Lysine 106 of the putative catalytic ATP-binding site of the Bacillus **subtilis** SecA protein is required for **functional complementation** of Escherichia coli secA mutants in vivo.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1993 Feb 25) 268 (6) 4504-10.
Journal code: HIV; 2985121R. ISSN: 0021-9258.

L26 ANSWER 20 OF 36 MEDLINE
TI Glutamyl-tRNA reductase from Escherichia coli and Synechocystis 6803. Gene structure and expression.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1992 Apr 25) 267 (12) 8275-80.
Journal code: HIV; 2985121R. ISSN: 0021-9258.

L26 ANSWER 21 OF 36 MEDLINE
TI Cyclohexadienyl dehydratase from Pseudomonas aeruginosa. Molecular cloning of the gene and characterization of the gene product.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1992 Feb 5) 267 (4) 2487-93.
Journal code: HIV; 2985121R. ISSN: 0021-9258.

L26 ANSWER 22 OF 36 MEDLINE
TI Molecular cloning and sequencing of a gene from alkalophilic Bacillus firmus OF4 that **functionally complements** an Escherichia coli strain carrying a deletion in the nhaA Na+/H+ antiporter gene.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1991 Dec 5) 266 (34) 23483-9.
Journal code: HIV; 2985121R. ISSN: 0021-9258.

L26 ANSWER 23 OF 36 MEDLINE
TI De novo purine nucleotide biosynthesis: cloning, sequencing and expression of a chicken PurH cDNA encoding 5-aminoimidazole-4-carboxamide-ribonucleotide transformylase-IMP cyclohydrolase.
SO GENE, (1991 Oct 15) 106 (2) 197-205.
Journal code: FOP; 7706761. ISSN: 0378-1119.

L26 ANSWER 24 OF 36 MEDLINE
TI Cloning and expression of avian glutamine phosphoribosylpyrophosphate amidotransferase. Conservation of a bacterial propeptide sequence supports a role for posttranslational processing.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1990 Dec 5) 265 (34) 21152-9.
Journal code: HIV; 2985121R. ISSN: 0021-9258.

L26 ANSWER 25 OF 36 MEDLINE
TI Cloning of a cDNA encoding adenylosuccinate lyase by **functional complementation** in Escherichia coli.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1990 Jun 5) 265 (16) 9011-4.
Journal code: HIV; 2985121R. ISSN: 0021-9258.

L26 ANSWER 26 OF 36 MEDLINE
TI Complementation and genetic inactivation: two alternative mechanisms leading to prototrophy in diploid bacterial clones.
SO MOLECULAR AND GENERAL GENETICS, (1984) 196 (3) 488-93.
Journal code: NGP; 0125036. ISSN: 0026-8925.

L26 ANSWER 27 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Conserved amino acids in the N- and C-terminal domains of integral membrane transporter FhuB define sites important for intra- and intermolecular interactions.
SO Molecular Microbiology, (1996) Vol. 20, No. 1, pp. 223-232. ISSN: 0950-382X.

L26 ANSWER 28 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI A Lactococcus lactis gene encodes a membrane protein with putative ATPase activity that is homologous to the essential Escherichia coli ftsH gene product.
SO Microbiology (Reading), (1994) Vol. 140, No. 10, pp. 2601-2610. ISSN: 1350-0872.

L26 ANSWER 29 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Isolation and characterization of the secE homologue gene of Bacillus **subtilis**.
SO Molecular Microbiology, (1993) Vol. 10, No. 1, pp. 133-142. ISSN: 0950-382X.

L26 ANSWER 30 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Environmental regulation of the fim switch controlling type 1 fimbrial phase variation in Escherichia coli K-12: Effects of temperature and media.
SO Journal of Bacteriology, (1993) Vol. 175, No. 19, pp. 6186-6193. ISSN: 0021-9193.

L26 ANSWER 31 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Isolation and characterization of Bacillus **subtilis** genes involved in siderophore biosynthesis: Relationship between Bacillus **subtilis** sfp-0 and Escherichia coli entD genes.
SO Journal of Bacteriology, (1993) Vol. 175, No. 19, pp. 6203-6211. ISSN: 0021-9193.

L26 ANSWER 32 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI The aroQ-encoded monofunctional chorismate mutase (CM-F) protein is a periplasmic enzyme in Erwinia herbicola.
SO Journal of Bacteriology, (1993) Vol. 175, No. 15, pp. 4729-4737. ISSN: 0021-9193.

L26 ANSWER 33 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI DE-NOVO PURINE NUCLEOTIDE BIOSYNTHESIS CLONING OF A COMPLEMENTARY DNA ENCODING ADENYLOSUCCINATE LYASE BY **FUNCTIONAL COMPLEMENTATION** IN ESCHERICHIA-COLI.
SO JOINT MEETING OF THE AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY, AND THE AMERICAN ASSOCIATION OF IMMUNOLOGISTS, NEW ORLEANS, LOUISIANA, USA, JUNE 4-7, 1990. FASEB (FED AM SOC EXP BIOL) J. (1990) 4 (7), A1986.
CODEN: FAJOEC. ISSN: 0892-6638.

L26 ANSWER 34 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI GENETIC STUDIES ON TEMPERATURE SENSITIVE MUTANTS OF BACILLUS-**SUBTILIS** BACTERIO PHAGE SPP-1.
SO FOLIA MICROBIOL, (1975) 20 (5), 389-395.
CODEN: FOMIAZ. ISSN: 0015-5632.

L26 ANSWER 35 OF 36 CAPLUS COPYRIGHT 2002 ACS
TI The Bacillus **subtilis** addAB genes are fully functional in Escherichia coli
SO Mol. Microbiol. (1993), 7(6), 915-23
CODEN: MOMIEE; ISSN: 0950-382X

L26 ANSWER 36 OF 36 CAPLUS COPYRIGHT 2002 ACS
TI Escherichia coli 4.5S RNA gene function can be complemented by heterologous bacterial RNA genes
SO J. Bacteriol. (1990), 172(3), 1284-8
CODEN: JOBAAY; ISSN: 0021-9193

=> D HIS

(FILE 'HOME' ENTERED AT 12:48:41 ON 24 MAY 2002)

FILE 'REGISTRY' ENTERED AT 12:49:49 ON 24 MAY 2002
E "SPOIIIE"/CN 25
L1 1 S E4
E "SPOOJ"/CN 25
L2 1 S E4

INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI,
BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,
CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB,
DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 12:53:52 ON
24 MAY 2002
SEA SPOIIIE
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1 FILE AQUASCI
47 FILE BIOSIS
6 FILE BIOTECHABS
6 FILE BIOTECHDS
28 FILE BIOTECHNO
1 FILE CABA
50 FILE CAPLUS
1 FILE CEABA-VTB
1 FILE CONFSCI
6 FILE DGENE
30 FILE EMBASE
23 FILE ESBIOBASE
3 FILE FSTA
54 FILE GENBANK
8 FILE IFIPAT
5 FILE JICST-EPLUS
34 FILE LIFESCI
37 FILE MEDLINE
9 FILE PASCAL
2 FILE PROMT
34 FILE SCISEARCH
8 FILE TOXCENTER
17 FILE USPATFULL
5 FILE WPIDS
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27 FILE BIOSIS
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9 FILE USPATFULL
2 FILE WPIDS
2 FILE WPINDEX
L4 QUE SPOOJ

FILE 'BIOSIS, CAPLUS' ENTERED AT 12:55:42 ON 24 MAY 2002
L5 97 S SPOIIIE
L6 46 S SPOOJ
L7 3 S L5 AND L6
L8 3 DUP REM L7 (0 DUPLICATES REMOVED)

FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 13:26:26 ON 24 MAY 2002
L9 45878 S REPORTER GENE
L10 317475 S COMPLEMENTA?
L11 2166 S L9 AND L10
L12 822 S L9(P)L10
L13 6401 S SIGMA FACTOR
L14 2900 S SIGMA F
L15 0 S L12 AND L14
L16 400 DUP REM L12 (422 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 13:31:57 ON 24 MAY 2002
E "PROKARYOTE"/CN 25
E "BACTERIUM"/CN 25

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 13:33:15 ON 24 MAY 2002
L17 400 S L16
L18 70987 S SUBTILIS
L19 4 S L17 AND L18
L20 556256 S COMPLEMENT?
L21 3739694 S FUNCTION?
L22 0 S L2O(W)L21
L23 4121 S L20(A)L21
L24 106 S L18 AND L23
L25 46 DUP REM L24 (60 DUPLICATES REMOVED)
L26 36 S L25 NOT PY>1998

=> S L9 AND L23
L27 38 L9 AND L23

=> DUP REM L27
PROCESSING COMPLETED FOR L27
L28 17 DUP REM L27 (21 DUPLICATES REMOVED)

=> D TI SO 1-17

L28 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Escherichia coli adenylate cyclase deficient strain for bacterial two-hybrid system based on a cAMP signaling cascade
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2

L28 ANSWER 2 OF 17 MEDLINE DUPLICATE 1
TI Multiple domains are required for the toxic activity of Pseudomonas aeruginosa ExoU.
SO JOURNAL OF BACTERIOLOGY, (2001 Jul) 183 (14) 4330-44.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L28 ANSWER 3 OF 17 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Transient transfection of polarized epithelial monolayers with CFTR and
reporter genes using lipid transfecting reagents.
SO FASEB Journal, (March 8, 2001) Vol. 15, No. 5, pp. A848. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for
Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA

March 31-April 04, 2001
ISSN: 0892-6638.

L28 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Functional Analysis of the Influenza A Virus cRNA Promoter and Construction of an Ambisense Transcription System
SO Virology (2001), 289(2), 400-410
CODEN: VIRLAX; ISSN: 0042-6822

L28 ANSWER 5 OF 17 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Regulator of G-protein signaling z1 (RGSz1) interacts with Galphai subunit
and regulates Galphai mediated signal transduction.
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 108. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San
Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.

L28 ANSWER 6 OF 17 MEDLINE DUPLICATE 2
TI Regulation of tomato leaf curl viral gene expression in host tissues.
SO MOLECULAR PLANT-MICROBE INTERACTIONS, (2000 May) 13 (5) 529-37.
Journal code: A9P; 9107902. ISSN: 0894-0282.

L28 ANSWER 7 OF 17 MEDLINE DUPLICATE 3
TI General or cell type-specific deletion and replacement of connexin-coding
DNA in the mouse.
SO METHODS, (2000 Feb) 20 (2) 205-18.
Journal code: CPO; 9426302. ISSN: 1046-2023.

L28 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI A bacterial multi-hybrid system and applications
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2

L28 ANSWER 9 OF 17 MEDLINE DUPLICATE 4
TI Characterization of baculovirus repeated open reading frames (bro) in
Bombyx mori nucleopolyhedrovirus.
SO JOURNAL OF VIROLOGY, (1999 Dec) 73 (12) 10339-45.
Journal code: KCV; 0113724. ISSN: 0022-538X.

L28 ANSWER 10 OF 17 MEDLINE DUPLICATE 5
TI Iron regulation and pathogenicity in Erwinia chrysanthemi 3937: role of
the Fur repressor protein.
SO MOLECULAR PLANT-MICROBE INTERACTIONS, (1999 Feb) 12 (2) 119-28.
Journal code: A9P; 9107902. ISSN: 0894-0282.

L28 ANSWER 11 OF 17 MEDLINE DUPLICATE 6
TI The products of the yeast MMS2 and two human homologs (hMMS2 and CROC-1)
define a structurally and functionally conserved Ubc-like protein family.
SO NUCLEIC ACIDS RESEARCH, (1998 Sep 1) 26 (17) 3908-14.
Journal code: O8L; 0411011. ISSN: 0305-1048.

L28 ANSWER 12 OF 17 MEDLINE DUPLICATE 7
TI Identification of a negative regulator of gibberellin action, HvSPY, in
barley.
SO PLANT CELL, (1998 Jun) 10 (6) 995-1007.
Journal code: BJU; 9208688. ISSN: 1040-4651.

L28 ANSWER 13 OF 17 MEDLINE DUPLICATE 8
TI Mms4, a putative transcriptional (co)activator, protects Saccharomyces
cerevisiae cells from endogenous and environmental DNA damage.
SO MOLECULAR AND GENERAL GENETICS, (1998 Apr) 257 (6) 614-23.
Journal code: NGP; 0125036. ISSN: 0026-8925.

L28 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI A stable shuttle vector system for efficient genetic complementation of
Helicobacter pylori strains by transformation and conjugation
SO Molecular & General Genetics (1998), 257(5), 519-528
CODEN: MGGEAE; ISSN: 0026-8925

L28 ANSWER 15 OF 17 MEDLINE DUPLICATE 9
TI Influence of gene dosage and autoregulation of the regulatory genes INO2
and INO4 on inositol/choline-repressible gene transcription in the yeast
Saccharomyces cerevisiae.
SO CURRENT GENETICS, (1997 Jun) 31 (6) 462-8.
Journal code: CUG; 8004904. ISSN: 0172-8083.

L28 ANSWER 16 OF 17 MEDLINE DUPLICATE 10
TI Iron-responsive genetic regulation in Campylobacter jejuni: cloning and
characterization of a fur homolog.
SO JOURNAL OF BACTERIOLOGY, (1994 Sep) 176 (18) 5852-6.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L28 ANSWER 17 OF 17 MEDLINE DUPLICATE 11
TI Expression of yeast cytochrome c1 is controlled at the transcriptional
level by glucose, oxygen and haem.
SO MOLECULAR AND GENERAL GENETICS, (1992 Apr) 232 (3) 447-59.
Journal code: NGP; 0125036. ISSN: 0026-8925.

=> D IBIB AB 16,14,13,11

L28 ANSWER 16 OF 17 MEDLINE DUPLICATE 10
ACCESSION NUMBER: 94364968 MEDLINE
DOCUMENT NUMBER: 94364968 PubMed ID: 8083178
TITLE: Iron-responsive genetic regulation in Campylobacter jejuni:
cloning and characterization of a fur homolog.
AUTHOR: Wooldridge K G; Williams P H; Ketley J M
CORPORATE SOURCE: Department of Genetics, University of Leicester, England.
SOURCE: JOURNAL OF BACTERIOLOGY, (1994 Sep) 176 (18) 5852-6.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-X78965
ENTRY MONTH: 199410
ENTRY DATE: Entered STN: 19941021
Last Updated on STN: 19980206
Entered Medline: 19941012
AB The Fur protein of Escherichia coli represses transcription from Fur-responsive genes in an iron-dependent manner. We have demonstrated a
Fur-like iron-responsive genetic regulatory activity operating in Campylobacter jejuni by using a chloramphenicol acetyl transferase **reporter gene** separated from its promoter by a synthetic
Fur-responsive operator. A fur-like gene has been cloned from C. jejuni by
partial **functional complementation** of an E. coli fur
mutation. Sequence analysis has shown that, at the amino acid level, the
C. jejuni Fur protein is 35% identical with its E. coli counterpart.

L28 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:297690 CAPLUS
DOCUMENT NUMBER: 129:63700

TITLE: A stable shuttle vector system for efficient genetic complementation of Helicobacter pylori strains by transformation and conjugation
AUTHOR(S): Heuermann, D.; Haas, R.
CORPORATE SOURCE: Max-Planck-Institut fur Biologie, Abteilung Infektionsbiologie, Tubingen, D-72076, Germany
SOURCE: Molecular & General Genetics (1998), 257(5), 519-528
CODEN: MGGEAE; ISSN: 0026-8925
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A versatile plasmid shuttle vector system was constructed, which is useful for genetic complementation of Helicobacter pylori strains or mutants with cloned genes of homologous or heterologous origin. The individual plasmid vectors consist of the minimal essential genetic elements, including an origin of replication for Escherichia coli, a H. pylori-specific replicon originally identified on a small cryptic H. pylori plasmid, an oriT sequence and a multiple cloning site. Shuttle plasmid pHe12 carries a chloramphenicol resistance cassette (catGC) and pHe13 contains a kanamycin resistance gene (aphA-3) as the selectable marker; both are functional in E. coli and H. pylori. The shuttle plasmids were introduced into the H. pylori strain P1 by natural transformation. A efficiency of 7.0 .times. 10-7 and 4.7 .times. 10-7 transformants per viable recipient was achieved with pHe12 and pHe13, resp., and both vectors showed stable, autonomous replication in H. pylori. An approx. 100-fold higher H. pylori transformation rate was obtained when the shuttle vectors for transformation were isolated from the homologous H. pylori strain, rather than E. coli, indicating that DNA restriction and modification mechanisms play a crucial role in plasmid transformation. Interestingly, both shuttle vectors could also be mobilized efficiently from E. coli into different H. pylori recipients, with pHe12 showing an efficiency of 2.0 .times. 10-5 transconjugants per viable H. pylori P1 recipient. Thus, DNA restriction seems to be strongly reduced or absent during conjugal transfer. The **functional complementation** of a recA-deficient H. pylori mutant by the cloned H. pylori recA+ gene, and the expression of the heterologous green fluorescent protein (GFP) in H. pylori demonstrate the general usefulness of this system, which will significantly facilitate the mol. anal. of H. pylori virulence factors in the future.

L28 ANSWER 13 OF 17 MEDLINE DUPLICATE 8
ACCESSION NUMBER: 1998265920 MEDLINE
DOCUMENT NUMBER: 98265920 PubMed ID: 9604884
TITLE: Mms4, a putative transcriptional (co)activator, protects Saccharomyces cerevisiae cells from endogenous and environmental DNA damage.
AUTHOR: Xiao W; Chow B L; Milo C N
CORPORATE SOURCE: Department of Microbiology, University of Saskatchewan, Saskatoon, Canada.. xiaow@sask.usask.ca
SOURCE: MOLECULAR AND GENERAL GENETICS, (1998 Apr) 257 (6) 614-23.
Journal code: NGP; 0125036. ISSN: 0026-8925.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199806
ENTRY DATE: Entered STN: 19980618
Last Updated on STN: 19980618
Entered Medline: 19980611
AB mms4-1 is one of several Saccharomyces cerevisiae mutants that exhibit an increased sensitivity to methyl methanesulfonate (MMS), but not to UV or X-rays. We have isolated the MMS4 gene by **functional complementation** of the MMS-sensitive phenotype in the mms4-1 strain. The MMS4 gene encodes a 691-amino acid, 78.7-kDa protein. The deduced Mms4 protein does not show significant homology to any of the known proteins in the database. However, several putative functional domains suggest that it may be a nuclear protein capable of interacting with other proteins. Examination of the mms4delta mutant phenotype indicates that the mutation not only sensitizes DNA to methylating and ethylating agents, but also to other DNA damage that blocks DNA replication. However, the mms4delta mutant appears to be more sensitive to chronic treatment than to acute treatment by DNA-damaging agents. Furthermore, the spontaneous mutation rate increases significantly in the mms4delta mutant. Mms4 alone, when fused to a Gal4 DNA-binding domain, is able to activate P(GAL1)-lacZ and P(GAL1)-HIS3 **reporter genes** in a two-hybrid system; the Mms4 transactivation domain maps to the highly acidic N-terminal region. These results collectively suggest that Mms4 may function as a transcriptional (co)activator and play an important role in DNA repair and/or synthesis.

L28 ANSWER 11 OF 17 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 1998371225 MEDLINE
DOCUMENT NUMBER: 98371225 PubMed ID: 9705497
TITLE: The products of the yeast MMS2 and two human homologs (hMMS2 and CROC-1) define a structurally and functionally conserved Ubc-like protein family.
AUTHOR: Xiao W; Lin S L; Broomfield S; Chow B L; Wei Y F
CORPORATE SOURCE: Department of Microbiology, University of Saskatchewan, Saskatoon, SK S7N 5E5, Canada.. xiaow@sask.usak.ca
SOURCE: NUCLEIC ACIDS RESEARCH, (1998 Sep 1) 26 (17) 3908-14.
Journal code: O8L; 0411011. ISSN: 0305-1048.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF049140
ENTRY MONTH: 199810
ENTRY DATE: Entered STN: 19981021
Last Updated on STN: 19981021
Entered Medline: 19981015
AB Eukaryotic genes encoding ubiquitin-congugating enzyme (Ubc)-like proteins have been isolated from both human and yeast cells. The CROC-1 gene was isolated by its ability to transactivate c- fos expression in cell culture through a tandem repeat enhancer sequence. The yeast MMS2 gene was cloned by its ability to complement the methyl methanesulfonate sensitivity of the mms2-1 mutant and was later shown to be involved in DNA post-replication repair. We report here the identification of a human MMS2 (hMMS2) cDNA encoding a novel human Ubc-like protein.

hMMS2 and CROC-1
share >90% amino acid sequence identity, but their DNA probes hybridize to
distinct transcripts. hMMS2 and CROC-1 also share approximately 50%
identity and 75% similarity with the entire length of yeast Mms2. Unlike
CROC-1 , whose transcript appears to be elevated in all tumor cell lines
examined, the hMMS2 transcript is only elevated in some tumor cell lines.
Collectively, these results indicate that eukaryotic cells may contain a
highly conserved family of Ubc-like proteins that play roles in diverse
cellular processes, ranging from DNA repair to signal transduction and
cell differentiation. The hMMS2 and CROC-1 genes are able to
functionally complement the yeast mms2 defects with
regard to sensitivity to DNA damaging agents and spontaneous mutagenesis.
Conversely, both MMS2 and hMMS2 were able to transactivate a c-fos - CAT
reporter gene in Rat-1 cells in a transient
co-transfection assay. We propose that either these proteins function in a
common cellular process, such as DNA repair, or they exert their diverse
biological roles through a similar biochemical interaction relative to
ubiquitination.

=> D IBIB AB L26
36,35,33,31,29,28,26,25,22,21,19,16,13,12,11,9,6,5,3

L26 ANSWER 36 OF 36 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:152712 CAPLUS
DOCUMENT NUMBER: 112:152712
TITLE: Escherichia coli 4.5S RNA gene function can be complemented by heterologous bacterial RNA genes
AUTHOR(S): Struck, Joachim C. R.; Lempicki, Richard A.; Toschka,
Holger Y.; Erdmann, Volker A.; Fournier, Maurille J.
CORPORATE SOURCE: Inst. Biochem., Freie Univ. Berlin, Berlin, D-1000,
Fed. Rep. Ger.
SOURCE: J. Bacteriol. (1990), 172(3), 1284-8
CODEN: JOBAAY; ISSN: 0021-9193
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The essential 4.5 S RNA gene of E. coli can be complemented by 4.5 S
RNA-like genes from 3 other eubacteria, including both gram-pos. and
gram-neg. organisms. Two of the genes encode RNAs similar in size to the
E. coli species; the third, from Bacillus **subtilis**, specifies an
RNA more than twice as large. The heterologous genes are expressed
efficiently in E. coli, and the product RNAs resemble those produced by
cognate cells. It is concluded that the heterologous RNAs can replace E.
coli 4.5 S RNA and that the essential function of 4.5 S RNA is
evolutionarily conserved. A consensus structure is presented for the
functionally related 4.5 S RNA homologs.

L26 ANSWER 35 OF 36 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:248685 CAPLUS
DOCUMENT NUMBER: 118:248685
TITLE: The Bacillus **subtilis** addAB genes are fully functional in Escherichia coli
AUTHOR(S): Kooistra, Jan; Haijema, Bert Jan; Venema, Gerard
CORPORATE SOURCE: Dep. Genet., Univ. Groningen, Haren, 9751 NN, Neth.
SOURCE: Mol. Microbiol. (1993), 7(6), 915-23
CODEN: MOMIEE; ISSN: 0950-382X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An E. coli recBCD deletion mutant was transformed with plasmids contg. the
B. **subtilis** add genes. The transformants had relatively high
ATP-dependent exonuclease and ATP-dependent helicase activities, and their
viability, the ability to repair UV-damaged DNA, and the recombination in
conjugation were nearly completely restored. The B. **subtilis**
Add enzyme did not show Chi-activity in phage .lambda. recombination. The
individual B. **subtilis** Add proteins were not able to form an
enzymically active complex with the E. coli RecBCD proteins, and they
could not complement the recBCD deficiency. Evidence is presented that
only 2 subunits are involved in the B. **subtilis** ATP-dependent
exonuclease. This is in contrast to E. coli in which the RecBCD enzyme
consists of three subunits.

L26 ANSWER 33 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1990:346193 BIOSIS
DOCUMENT NUMBER: BR39:41454
TITLE: DE-NOVO PURINE NUCLEOTIDE BIOSYNTHESIS CLONING OF A
COMPLEMENTARY DNA ENCODING ADENYLOSUCCINATE LYASE BY
FUNCTIONAL COMPLEMENTATION IN ESCHERICHIA-COLI.
AUTHOR(S): BADLAK J; AIMI J; WILLIAMS J; CHEN Z; ZALKIN H; DIXON J E
CORPORATE SOURCE: PURDUE UNIV., DEP. OF BIOCHEM., WEST LAFAYETTE, INDIANA
47907.
SOURCE: JOINT MEETING OF THE AMERICAN SOCIETY FOR BIOCHEMISTRY AND
MOLECULAR BIOLOGY, AND THE AMERICAN ASSOCIATION OF
IMMUNOLOGISTS, NEW ORLEANS, LOUISIANA, USA, JUNE 4-7, 1990.
FASEB (FED AM SOC EXP BIOL) J, (1990) 4 (7), A1986.
CODEN: FAJOEC. ISSN: 0892-6638.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L26 ANSWER 31 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1993:499267 BIOSIS
DOCUMENT NUMBER: PREV199396123274
TITLE: Isolation and characterization of Bacillus **subtilis** genes involved in siderophore biosynthesis: Relationship between Bacillus **subtilis** sfp-0 and Escherichia coli entD genes.
AUTHOR(S): Grossman, Trudy H.; Tuckman, Margareta; Ellestad, Sarah;
Osburne, Marcia S. (1)
CORPORATE SOURCE: (1) Procept Inc., 840 Memorial Dr., Cambridge, MA 02139 USA
SOURCE: Journal of Bacteriology, (1993) Vol. 175, No. 19, pp. 6203-6211.
ISSN: 0021-9193.
DOCUMENT TYPE: Article
LANGUAGE: English
AB In response to iron deprivation, Bacillus **subtilis** secretes a catecholic siderophore, 2,3-dihydroxybenzoyl glycine, which is similar to
the precursor of the Escherichia coli siderophore enterobactin. We

isolated two sets of B. **subtilis** DNA sequences that complemented the mutations of several E. coli siderophore-deficient (ent) mutants with defective enterobactin biosynthesis enzymes. One set contained DNA sequences that complemented only an entD mutation. The second set contained DNA sequences that complemented various combinations of entB, entE, entC, and entA mutations. The two sets of DNA sequences did not appear to overlap. A B. **subtilis** mutant containing an insertion in the region of the entD homolog grew much more poorly in low-iron medium and with markedly different kinetics. These data indicate that (i) at least five of the siderophore biosynthesis genes of B. **subtilis** can function in E. coli, (ii) the genetic organization of these siderophore genes in B. **subtilis** is similar to that in E. coli, and (iii) the B. **subtilis** entD homolog is required for efficient growth in low-iron medium. The nucleotide sequence of the B. **subtilis** DNA contained in plasmid pENTA22, a clone expressing the B. **subtilis** entD homolog, revealed the presence of at least two genes. One gene was identified as sfp-0, a previously reported gene involved in the production of surfactin in B. **subtilis** and which is highly homologous to the E. coli entD gene. We present evidence that the E. coli entD and B. **subtilis** sfp-0 genes are interchangeable and that their products are members of a new family of proteins which function in the secretion of peptide molecules.

L26 ANSWER 29 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1993:585144 BIOSIS
DOCUMENT NUMBER: PREV199497004514
TITLE: Isolation and characterization of the secE homologue gene of Bacillus **subtilis**.
AUTHOR(S): Jeong, Sang Min; Yoshikawa, Hirofumi; Takahashi, Hideo (1)
CORPORATE SOURCE: (1) Inst. Molecular Cellular Biosciences, Univ. Tokyo, Bunkyo-ku, Tokyo 113 Japan
SOURCE: Molecular Microbiology, (1993) Vol. 10, No. 1, pp. 133-142.
ISSN: 0950-382X.
DOCUMENT TYPE: Article
LANGUAGE: English
AB A 4.0 kb EcoRI fragment of Bacillus **subtilis** conferring thiostrepton resistance was cloned and characterized. By nucleotide sequencing of the relevant region, six open reading frames were established, which corresponded to a part of spoOH, a ribosomal protein gene (rpmG), an unidentified open reading frame (orfE), a transcription antiterminator gene nusG, and ribosomal protein genes rplK and rplA. The orfE-encoded 59-amino-acid polypeptide had a low, but significant, sequence similarity with the carboxy-terminal region of the Escherichia coli SecE protein. A cold-sensitive secE mutation of E. coli was complemented by the plasmid-borne orfE sequence. Furthermore, the normal processing of a proOmpA protein was observed when the secE cold-sensitive strain carried an orfE plasmid, indicating that orfE is the secE homologue of B. **subtilis**. The B. **subtilis** secE has only one transmembrane sequence compared to the three in E. coli.

L26 ANSWER 28 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1994:545332 BIOSIS
DOCUMENT NUMBER: PREV199598004880
TITLE: A Lactococcus lactis gene encodes a membrane protein with putative ATPase activity that is homologous to the essential Escherichia coli ftsH gene product.
AUTHOR(S): Nilsson, Dan (1); Lauridsen, Anette A.; Tomoyasu, Toshifumi; Ogura, Teru
CORPORATE SOURCE: (1) Dep. Genetics, Chr. Hansen's Lab. Danmark A/S, Boge Alle 10-12, DK-2970 Horsholm Denmark
SOURCE: Microbiology (Reading), (1994) Vol. 140, No. 10, pp. 2601-2610.
ISSN: 1350-0872.
DOCUMENT TYPE: Article
LANGUAGE: English
AB A gene, encoding a protein homologous to an essential Escherichia coli protein, FtsH, was identified adjacent to the hpt gene and the trnA operon in the Gram-positive bacterium Lactococcus lactis. The deduced amino acid sequence of the gene product showed full-length similarity to FtsH of E. coli, Yme1p of Saccharomyces cerevisiae and a conserved region found in a new family of putative ATPases. In-frame fusions of L. lactis ftsH and phoA1 in E. coli, and immunodetection of the L. lactis FtsH protein in cell fractions using anti-E. coli FtsH serum showed that L. lactis ftsH was expressed and encodes a membrane protein. When contained on a high copy number plasmid, the L. lactis ftsH gene complemented the lethality of a DELTA-ftsH3::kan mutation in E. coli at 37 degree C and below, indicating that the L. lactis ftsH gene can functionally replace the E. coli ftsH gene to some extent. The resulting E. coli strain showed temperature sensitivity and salt sensitivity. A L. lactis mutant with an insertion into ftsH was salt-, heat- and cold-sensitive. These results suggest that FtsH is somehow involved in stress responses. Southern hybridization analysis indicated that genes homologous to ftsH of L. lactis were also present in Bacillus **subtilis**, and several Lactobacillus and Leuconostoc species, suggesting high conservation of ftsH in bacterial species.

L26 ANSWER 26 OF 36 MEDLINE
ACCESSION NUMBER: 85060517 MEDLINE
DOCUMENT NUMBER: 85060517 PubMed ID: 6438446
TITLE: Complementation and genetic inactivation: two alternative mechanisms leading to prototrophy in diploid bacterial clones.
AUTHOR: Levi-Meyrueis C; Sanchez-Rivas C
SOURCE: MOLECULAR AND GENERAL GENETICS, (1984) 196 (3) 488-93.
Journal code: NGP; 0125036. ISSN: 0026-8925.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198501
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19850110
AB Evidence for diploidy at loci located all around the Bacillus **subtilis** chromosome previously led us to refer to the prototrophic bacterial clones produced by fusion of polyauxotrophic protoplasts as complementing diploid clones (Levi-Meyrueis et al. 1980; Sanchez-Rivas 1982). In this paper, evidence is presented that gene inactivation may occur in such clones, as judged from the unequal expression of three unselected markers and their low transforming activity in cell lysates, an established property of inactivated genes (Bohin et al. 1982). The insensitivity to protease treatment of the lysates and also the low

transforming activity observed with purified DNA may indicate that chromosome inactivation does not necessarily result from the mere attachment of proteins to DNA. Cotransfer by transformation of similarly expressed genes, initially located on separate chromosomes, suggests that genetic recombination has taken place, resulting in the reassortment of active and inactive genes on separate chromosomes. Several genetic structures compatible with the observations are presented which illustrate that prototrophy may result from such reassortment as well as from **functional complementation**.

L26 ANSWER 25 OF 36 MEDLINE
ACCESSION NUMBER: 90264380 MEDLINE
DOCUMENT NUMBER: 90264380 PubMed ID: 2111814
TITLE: Cloning of a cDNA encoding adenylosuccinate lyase by **functional complementation** in Escherichia coli.
AUTHOR: Aimi J; Badylak J; Williams J; Chen Z D; Zalkin H; Dixon J E
CORPORATE SOURCE: Department of Biochemistry, Purdue University, West Lafayette, Indiana 47907.
CONTRACT NUMBER: 18024 (NIAID)
AI 27713 (NIGMS)
GM 24658
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1990 Jun 5) 265 (16) 9011-4.
Journal code: HIV; 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-M37901
ENTRY MONTH: 199007
ENTRY DATE: Entered STN: 19900810
Last Updated on STN: 19900810
Entered Medline: 19900702
AB Adenylosuccinate lyase was cloned by **functional complementation** of an Escherichia coli purB mutant using an avian liver cDNA expression library. The derived amino acid sequence is homologous to the bacterial purB-encoded adenylosuccinate lyase which catalyzes the same two steps in purine biosynthesis as the enzyme from animals. Avian adenylosuccinate lyase also shows regions of extensive sequence similarity to the urea cycle enzyme, argininosuccinate lyase. This homology suggests a similar mechanism for catalysis. Homology of adenylosuccinate and argininosuccinate lyases is intriguing because chickens do not utilize the urea cycle in nitrogen excretion. This is the first report of the cloning of a eukaryotic cDNA encoding adenylosuccinate lyase, and it affords a route to isolate the corresponding human gene which has been suggested to be defective in autistic children.

L26 ANSWER 22 OF 36 MEDLINE
ACCESSION NUMBER: 92078231 MEDLINE
DOCUMENT NUMBER: 92078231 PubMed ID: 1660475
TITLE: Molecular cloning and sequencing of a gene from alkaliphilic Bacillus firmus OF4 that **functionally complements** an Escherichia coli strain carrying a deletion in the nhaA Na+/H+ antiporter gene.
AUTHOR: Ivey D M; Guffanti A A; Bossewitch J S; Padan E; Krulwich T A
CORPORATE SOURCE: Department of Biochemistry, Mount Sinai School of Medicine, City University of New York, New York.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1991 Dec 5) 266 (34) 23483-9.
Journal code: HIV; 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-M55199; GENBANK-M55200; GENBANK-M55201; GENBANK-M73530; GENBANK-M96682; GENBANK-S66610; GENBANK-S66768; GENBANK-S69489; GENBANK-S69493; GENBANK-S69544
ENTRY MONTH: 199201
ENTRY DATE: Entered STN: 19920202
Last Updated on STN: 19920202
Entered Medline: 19920113
AB A gene has been cloned from a DNA library from alkaliphilic Bacillus firmus OF4 that **functionally complements** a mutant strain of Escherichia coli, NM81, that carries a deletion for one of that strain's Na+/H+ antiporter genes (delta nhaA). The cloned alkaliphile gene restored to NM81 the ability to grow at pH 7.5 in the presence of 0.6 M NaCl and on 100 mM Li+ in the presence of melibiose, and concomitantly led to an increase in the membrane associated Na+/H+ antiport activity. The biologically active alkaliphile DNA was identified as an incomplete open reading frame, the sequence of which would encode a hydrophobic protein. The insert was used to isolate clones containing the complete open reading frame, which would be predicted to encode a protein with a molecular weight of 42,960 and multiple membrane spanning regions. When the open reading frame was expressed under the control of the T7 promoter, the gene product was localized in the membrane. Southern analysis indicated no homology between the alkaliphile gene, which we propose to call nhaC, and the nhaA gene of Escherichia coli, nor with other genes in digests of DNA from E. coli, Bacillus **subtilis**, or Bacillus alcalophilus. Although there was also no significant similarity between the deduced protein products of the alkaliphile gene and the nhaA gene of E. coli, there was a small region of significant similarity between the deduced alkaliphile gene product and the protein encoded by a human Na+/H+ antiporter gene (Sardet, C., Franchi, A., and Pouyssegur, J. (1989) Cell 56, 271-280).

L26 ANSWER 21 OF 36 MEDLINE
ACCESSION NUMBER: 92129331 MEDLINE
DOCUMENT NUMBER: 92129331 PubMed ID: 1733946
TITLE: Cyclohexadienyl dehydratase from Pseudomonas aeruginosa. Molecular cloning of the gene and characterization of the gene product.
AUTHOR: Zhao G S; Xia T H; Fischer R S; Jensen R A
CORPORATE SOURCE: Department of Microbiology and Cell Science, University of Florida, Gainesville 32611.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1992

Feb 5) 267 (4)
2487-93.
Journal code: HIV; 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-D10517; GENBANK-D10518; GENBANK-D10519;
GENBANK-D10520; GENBANK-D12749; GENBANK-D12750;
GENBANK-D12751; GENBANK-D12752; GENBANK-D12753;
GENBANK-M74132
ENTRY MONTH: 199203
ENTRY DATE: Entered STN: 19920322
Last Updated on STN: 19920322
Entered Medline: 19920303
AB The gene encoding cyclohexadienyl dehydratase (denoted pheC) was cloned
from Pseudomonas aeruginosa by **functional complementation** of a pheA auxotroph of Escherichia coli. The gene
was highly expressed in E. coli due to the use of the high-copy number
vector pUC18. The P. aeruginosa cyclohexadienyl dehydratase expressed in
E. coli was purified to electrophoretic homogeneity. The latter enzyme
exhibited identical physical and biochemical properties as those obtained
for cyclohexadienyl dehydratase purified from P. aeruginosa. The activity
ratios of prephenate dehydratase to arogenate dehydratase remained
constant (about 3.3-fold) throughout purification, thus demonstrating a
single protein having broad substrate specificity. The cyclohexadienyl
dehydratase exhibited Km values of 0.42 mM for prephenate and 0.22 mM for
L-arogenate, respectively. The pheC gene was 807 base pairs in length,
encoding a protein with a calculated molecular mass of 30,480 daltons.
This compares with a molecular mass value of 29.5 kDa determined for the
purified enzyme by sodium dodecyl sulfate-polyacrylamide gel
electrophoresis. Since the native molecular mass determined by gel
filtration was 72 kDa, the enzyme probably is a homodimer. Comparison of
the deduced amino acid sequence of pheC from P. aeruginosa with those of
the prephenate dehydratases of Corynebacterium glutamicum, Bacillus
subtilis, E. coli, and Pseudomonas stutzeri by standard pairwise
alignments did not establish obvious homology. However, a more detailed
analysis revealed a conserved motif (containing a threonine residue known
to be essential for catalysis) that was shared by all of the dehydratase
proteins.

L26 ANSWER 19 OF 36 MEDLINE
ACCESSION NUMBER: 93179466 MEDLINE
DOCUMENT NUMBER: 93179466 PubMed ID: 8440733
TITLE: Lysine 106 of the putative catalytic ATP-binding site of the Bacillus **subtilis** SecA protein is required for **functional complementation** of Escherichia coli secA mutants in vivo.
AUTHOR: Klose M; Schimz K L; van der Wolk J; Driessen A J; Freudl R
CORPORATE SOURCE: Institut fur Biotechnologie 1, Forschungszentrum Julich
GmbH, Germany.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1993 Feb 25) 268 (6)
4504-10.
Journal code: HIV; 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199303
ENTRY DATE: Entered STN: 19930416
Last Updated on STN: 19930416
Entered Medline: 19930326
AB The SecA protein is a major component of the cellular machinery that
mediates the translocation of proteins across the Escherichia coli plasma
membrane. The secA gene from Bacillus **subtilis** was cloned and
expressed in E. coli under the control of the lac or trc promoter. The
temperature-sensitive growth and secretion defects of various E. coli secA
mutants were complemented by the B. **subtilis** SecA protein,
provided the protein was expressed at moderate levels. Under
overproduction conditions, no complementation was observed. One of the
main features of the SecA protein is the translocation ATPase activity
which, together with the protonmotive force, drives the movement of
proteins across the plasma membrane. A putative ATP-binding motif can be
identified in the SecA protein resembling the consensus Walker A type
motif. Replacement of a lysine residue at position 106, which corresponds
to an invariable amino acid residue, in the consensus motif by asparagine
(K106N) resulted in the loss of the ability of the B. **subtilis**
SecA protein to complement the growth and secretion defects of E. coli
secA mutants. In addition, the presence of the K106N SecA protein
interfered with protein translocation, most likely at an ATP-requiring
step. We conclude that lysine 106 is part of the catalytic ATP-binding
site of the B. **subtilis** SecA protein, which is required for
protein translocation in vivo.

L26 ANSWER 16 OF 36 MEDLINE
ACCESSION NUMBER: 95110050 MEDLINE
DOCUMENT NUMBER: 95110050 PubMed ID: 7811002
TITLE: Cloning and nucleotide sequence of Pseudomonas aeruginosa
DNA gyrase gyrA gene from strain PAO1 and quinolone-resistant clinical isolates.
AUTHOR: Kureishi A; Diver J M; Beckthold B; Schollaardt T; Bryan L
E
CORPORATE SOURCE: Department of Microbiology and Infectious Diseases,
University of Calgary, Alberta, Canada.
SOURCE: ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1994 Sep) 38 (9)
1944-52.
Journal code: 6HK; 0315061. ISSN: 0066-4804.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-L29417
ENTRY MONTH: 199501
ENTRY DATE: Entered STN: 19950215
Last Updated on STN: 19950215
Entered Medline: 19950127
AB The Pseudomonas aeruginosa DNA gyrase gyrA gene was cloned and sequenced
from strain PAO1. An open reading frame of 2,769 bp was found; it coded
for a protein of 923 amino acids with an estimated molecular mass of 103

kDa. The derived amino acid sequence shared 67% identity with Escherichia coli GyrA and 54% identity with Bacillus **subtilis** GyrA, although conserved regions were present throughout the sequences, particularly toward the N terminus. Complementation of an E. coli mutant with a temperature-sensitive gyrA gene with the PAO1 gyrA gene showed that the gene is expressed in E. coli and is able to **functionally complement** the E. coli DNA gyrase B subunit. Expression of PAO1 gyrA in E. coli or P. aeruginosa with mutationally altered gyrA genes caused a reversion to wild-type quinolone susceptibility, indicating that the intrinsic susceptibility of the PAO1 GyrA to quinolones is comparable to that of the E. coli enzyme. PCR was used to amplify 360 bp of P. aeruginosa gyrA encompassing the so-called quinolone resistance-determining region from ciprofloxacin-resistant clinical isolates from patients with cystic fibrosis. Mutations were found in three of nine isolates tested; these mutations caused the following alterations in the sequence of GyrA: Asp at position 87 (Asp-87) to Asn, Asp-87 to Tyr, and Thr-83 to Ile. The resistance mechanisms in the other six isolates are unknown. The results of the study suggested that mechanisms other than a mutational alteration in gyrA are the most common mechanism of ciprofloxacin resistance in P. aeruginosa from the lungs of patients with cystic fibrosis.

L26 ANSWER 13 OF 36 MEDLINE
ACCESSION NUMBER: 95348093 MEDLINE
DOCUMENT NUMBER: 95348093 PubMed ID: 7622480
TITLE: OpuA, an osmotically regulated binding protein-dependent transport system for the osmoprotectant glycine betaine in Bacillus **subtilis**.
AUTHOR: Kempf B; Bremer E
CORPORATE SOURCE: Max-Planck-Institute for Terrestrial Microbiology, Marburg, Germany.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1995 Jul 14) 270 (28) 16701-13.
Journal code: HIV; 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-U17292
ENTRY MONTH: 199508
ENTRY DATE: Entered STN: 19950911
Last Updated on STN: 19990129
Entered Medline: 19950825
AB Exogenously provided glycine betaine can efficiently protect Bacillus **subtilis** from the detrimental effects of high osmolarity environments. Through **functional complementation** of an Escherichia coli mutant deficient in glycine betaine uptake with a gene library from B. **subtilis**, we have identified a multicomponent glycine betaine transport system, OpuA. Uptake of radiolabeled glycine betaine in B. **subtilis** was found to be osmotically stimulated and was strongly decreased in a mutant strain lacking the OpuA transport system. DNA sequence analysis revealed that the components of the OpuA system are encoded by anoperon (opuA) comprising three structural genes: opuAA, opuAB, and opuAC. The products of these genes exhibit features characteristic for binding protein-dependent transport systems and in particular show homology to the glycine betaine uptake system ProU from E. coli. Expression of the opuA operon is under osmotic control. The transcriptional initiation sites of opuA were mapped by high resolution primer extension analysis, and two opuA mRNAs were detected that differed by 38 base pairs at their 5' ends. Synthesis of the shorter transcript was strongly increased in cells grown at high osmolarity, whereas the amount of the longer transcript did not vary in response to medium osmolarity.
Physical and genetic mapping experiments allowed the positioning the opuA operon at 25 degrees on the genetic map of B. **subtilis**.

L26 ANSWER 12 OF 36 MEDLINE
ACCESSION NUMBER: 95369709 MEDLINE
DOCUMENT NUMBER: 95369709 PubMed ID: 7642114
TITLE: Isolation of cDNAs encoding GTP cyclohydrolase II from Arabidopsis thaliana.
AUTHOR: Kobayashi M; Sugiyama M; Yamamoto K
CORPORATE SOURCE: Biological Institute, Faculty of Science, Tohoku University, Sendai, Japan.
SOURCE: GENE, (1995 Jul 28) 160 (2) 303-4.
Journal code: FOP; 7706761. ISSN: 0378-1119.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-D45165
ENTRY MONTH: 199509
ENTRY DATE: Entered STN: 19950930
Last Updated on STN: 19950930
Entered Medline: 19950921
AB A GTP cyclohydrolase II-encoding gene from Arabidopsis thaliana was isolated through **functional complementation** of a mutant of Escherichia coli, BSV18, deficient in this protein. The derived amino-acid sequence constitutes a polypeptide of 27 kDa and shows 37-58% identity with previously published sequences of Escherichia coli, Bacillus **subtilis**, Photobacterium leiognathi and P. phosphoreum.

L26 ANSWER 11 OF 36 MEDLINE
ACCESSION NUMBER: 95383715 MEDLINE
DOCUMENT NUMBER: 95383715 PubMed ID: 7655065
TITLE: A new Bradyrhizobium japonicum gene required for free-living growth and bacteroid development is conserved in other bacteria and in plants.
AUTHOR: Weidenhaupt M; Schmid-Appert M; Thony B; Hennecke H; Fischer H M
CORPORATE SOURCE: Mikrobiologisches Institut, Eidgenossische Technische Hochschule, ETH-Zentrum, Zurich, Switzerland.
SOURCE: MOLECULAR PLANT-MICROBE INTERACTIONS, (1995 May-Jun) 8 (3) 454-64.
Journal code: A9P; 9107902. ISSN: 0894-0282.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-L34743; GENBANK-X54385; GENBANK-Z17610
ENTRY MONTH: 199510
ENTRY DATE: Entered STN: 19951013
Last Updated on STN: 19990129
Entered Medline: 19951004

AB In the nitrogen-fixing soybean symbiont Bradyrhizobium japonicum, a new DNA region, orf74, was discovered which is required for optimal free-living growth and, by consequence, also necessary for the formation of an effective symbiosis. A Tn5-233 insertion of orf14 resulted in a mutant, strain 74, that has a reduced growth rate in free-living cultures under all conditions tested and less than 1% residual symbiotic nitrogen fixation activity as compared with the wild type. Nodule distribution and nodule morphology are severely affected similarly as in a previously characterized B. japonicum nifA mutant. Protein databank searches revealed that the 142-amino-acid protein encoded by orf74 is homologous to a 161-amino-acid protein encoded by orf17 of Bacillus **subtilis** (approximately 46% identity; J. C. R. Struck, R. Kretschmer-Kazemi Far, W. Schroder, F. Hucho, H. Y. Toschka, and V. A. Erdmann, Biochim. Biophys. Acta, 1050:80-83, 1990) as well as to a 178-amino-acid protein encoded by orf178 of Escherichia coli (approximately 45% identity; K. L. Poulsen, N. W. Larsen, S. Molin, and P. Andersson, Mol. Microbiol., 6:895-905, 1992). Significant similarity was also found with unknown ORFs of two plant species. When expressed from a strong constitutive promoter, orf17 of B. **subtilis** could partially complement B. japonicum mutant 74. By contrast, orf74 of B. japonicum was unable to **functionally complement** an E. coli orf178 mutant. The conservation of this DNA region in gram-negative and gram-positive bacteria suggests that the gene is essential for a fundamental cellular process which is required in B. japonicum for both free-living and symbiotic growth.

L26 ANSWER 9 OF 36 MEDLINE
ACCESSION NUMBER: 96013068 MEDLINE
DOCUMENT NUMBER: 96013068 PubMed ID: 7557338
TITLE: Functional characterization of the Staphylococcus carnosus SecA protein in Escherichia coli and Bacillus **subtilis** secA mutant strains.
AUTHOR: Klein M; Meens J; Freudl R
CORPORATE SOURCE: Institut fur Biotechnologie 1, Forschungszentrum Julich GmbH, Germany.
SOURCE: FEMS MICROBIOLOGY LETTERS, (1995 Sep 15) 131 (3) 271-7.
Journal code: FML; 7705721. ISSN: 0378-1097.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-D10279; GENBANK-D90218; GENBANK-L32090; GENBANK-M20791; GENBANK-U06928; GENBANK-X64705; GENBANK-X65961; GENBANK-X74592; GENBANK-X79725; GENBANK-Z35718
ENTRY MONTH: 199510
ENTRY DATE: Entered STN: 19951227
Last Updated on STN: 19951227
Entered Medline: 19951026
AB The Staphylococcus carnosus secA gene was cloned using the Bacillus **subtilis** secA gene as a probe. The S. carnosus secA encodes a polypeptide of 844 amino acid residues which is homologous to other known SecA proteins. The S. carnosus SecA **functionally complemented** the growth and secretion defects of a temperature-sensitive B. **subtilis** secA mutant at the non-permissive temperature. In contrast, the growth defect of an Escherichia coli secA mutant could not be complemented by the S. carnosus SecA protein. Our results suggest that the interactions of SecA with precursor proteins and/or other components of bacterial preprotein translocase are optimized within each organism.

L26 ANSWER 6 OF 36 MEDLINE
ACCESSION NUMBER: 96224138 MEDLINE
DOCUMENT NUMBER: 96224138 PubMed ID: 8621563
TITLE: Cloning and characterization of the yeast HEM14 gene coding for protoporphyrinogen oxidase, the molecular target of diphenyl ether-type herbicides.
AUTHOR: Camadro J M; Labbe P
CORPORATE SOURCE: Laboratoire de Biochimie des Porphyrines, Departement de Microbiologie, Institut Jacques Monod, 2 Place Jussieu, F-75251 Paris Cedex 05, France.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1996 Apr 12) 271 (15) 9120-8.
Journal code: HIV; 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-Z71381
ENTRY MONTH: 199606
ENTRY DATE: Entered STN: 19960627
Last Updated on STN: 19980206
Entered Medline: 19960620
AB Protoporphyrinogen oxidase, which catalyzes the oxygen-dependent aromatization of protoporphyrinogen IX to protoporphyrin IX, is the molecular target of diphenyl ether type herbicides. The structural gene for the yeast protoporphyrinogen oxidase, HEM14, was isolated by **functional complementation** of a hem14-1 protoporphyrinogen oxidase-deficient yeast mutant, using a novel one-step colored screening procedure to identify heme-synthesizing cells. The hem14-1 mutation was genetically linked to URA3, a marker on chromosome V, and HEM14 was physically mapped on the right arm of this chromosome, between PRP22 and FAA2. Disruption of the HEM14 gene leads to protoporphyrinogen oxidase deficiency in vivo (heme deficiency and accumulation of heme precursors), and in vitro (lack of immunodetectable protein or enzyme activity). The HEM14 gene encodes a 539-amino acid protein (59,665 Da; pI 9.3) containing an ADP- beta alpha beta-binding fold similar to those of several other flavoproteins. Yeast protoporphyrinogen oxidase was somewhat similar to the HemY gene product of Bacillus **subtilis** and to the human and mouse protoporphyrinogen oxidases. Studies on protoporphyrinogen oxidase overexpressed in yeast and purified as wild-type enzyme showed that (i) the NH2-terminal mitochondrial targeting sequence of protoporphyrinogen oxidase is not cleaved during importation; (ii) the enzyme, as purified, had a typical flavin semiquinone absorption spectrum; and (iii) the enzyme was strongly inhibited by diphenyl ether-type herbicides and readily photolabeled by a diazoketone derivative of tritiated acifluorfen. The mutant allele hem14-1 contains two mutations, L422P and K424E, responsible for the inactive enzyme. Both mutations introduced independently in

the
wild-type HEM14 gene completely inactivated the protein when analyzed in
an Escherichia coli expression system.

L26 ANSWER 5 OF 36 MEDLINE
ACCESSION NUMBER: 96359357 MEDLINE
DOCUMENT NUMBER: 96359357 PubMed ID: 8752321
TITLE: Three transport systems for the osmoprotectant glycine betaine operate in Bacillus **subtilis**: characterization of OpuD.
AUTHOR: Kappes R M; Kempf B; Bremer E
CORPORATE SOURCE: Max Planck Institute for Terrestrial Microbiology, Marburg, Germany.
SOURCE: JOURNAL OF BACTERIOLOGY, (1996 Sep) 178 (17) 5071-9.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF008220; GENBANK-U50082
ENTRY MONTH: 199611
ENTRY DATE: Entered STN: 19961219
Last Updated on STN: 20000303
Entered Medline: 19961107
AB The accumulation of the osmoprotectant glycine betaine from exogenous
sources provides a high degree of osmotic tolerance to Bacillus **subtilis**. We have identified, through **functional complementation** of an Escherichia coli mutant defective in glycine betaine uptake, a new glycine betaine transport system from B. **subtilis**. The DNA sequence of a 2,310-bp segment of the cloned region revealed a single gene (opuD) whose product (OpuD) was essential
for glycine betaine uptake and osmoprotection in E. coli. The opuD gene
encodes a hydrophobic 56.13-kDa protein (512 amino acid residues). OpuD
shows a significant degree of sequence identity to the choline transporter
BetT and the carnitine transporter CaiT from E. coli and a BetT-like protein from Haemophilus influenzae. These membrane proteins form a family
of transporters involved in the uptake of trimethylammonium compounds. The
OpuD-mediated glycine betaine transport activity in B. **subtilis** is controlled by the environmental osmolarity. High osmolarity stimulates
de novo synthesis of OpuD and activates preexisting OpuD proteins to
achieve maximal glycine betaine uptake activity. An opuD mutant was
constructed by marker replacement, and the OpuD-mediated glycine betaine
uptake activity was compared with that of the previously identified multicomponent OpuA and OpuC (ProU) glycine betaine uptake systems. In
addition, a set of mutants was constructed, each of which synthesized only
one of the three glycine betaine uptake systems. These mutants were used
to determine the kinetic parameters for glycine betaine transport through
OpuA, OpuC, and OpuD. Each of these uptake systems shows high substrate
affinity, with Km values in the low micromolar range, which should allow
B. **subtilis** to efficiently acquire the osmoprotectant from the environment. The systems differed in their contribution to the overall glycine betaine accumulation and osmoprotection. A triple opuA, opuC, and
opuD mutant strain was isolated, and it showed no glycine betaine uptake
activity, demonstrating that three transport systems for this osmoprotectant operate in B. **subtilis**.

L26 ANSWER 3 OF 36 MEDLINE
ACCESSION NUMBER: 1998037520 MEDLINE
DOCUMENT NUMBER: 98037520 PubMed ID: 9371469
TITLE: Characterization of Bacillus **subtilis** hemN.
AUTHOR: Hippler B; Homuth G; Hoffmann T; Hungerer C; Schumann W; Jahn D
CORPORATE SOURCE: Abteilung Biochemie, Max-Planck-Institut fur Terrestrische Mikrobiologie, Marburg, Germany.
SOURCE: JOURNAL OF BACTERIOLOGY, (1997 Nov) 179 (22) 7181-5.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199712
ENTRY DATE: Entered STN: 19980109
Last Updated on STN: 19980109
Entered Medline: 19971212
AB A recently cloned Bacillus **subtilis** open reading frame (hemN) upstream of the dnaK operon was identified as encoding a protein involved
in oxygen-independent coproporphyrinogen III decarboxylation. B. **subtilis** hemN **functionally complemented** two
Salmonella typhimurium hemF hemN double mutants under aerobic and
anaerobic conditions. A B. **subtilis** hemN mutant accumulated coproporphyrinogen III only under anaerobic conditions. Interestingly,
growth experiments using the B. **subtilis** hemN mutant revealed normal aerobic and anaerobic growth, indicating the presence of an alternative oxygen-independent enzymatic system. Northern blot experiments
identified hemN mRNA as part of an approximately 7-kb pentacistronic
transcript consisting of lepA, hemN, hrcA, grpE, and dnaK. One potential
start site for aerobic and anaerobic transcription was located 37 bp upstream of the translational start codon of lepA. Comparable amounts of
hemN transcript were observed under aerobic and anaerobic growth conditions. No experimental evidence for the presence of hemF in B. **subtilis** was obtained. Moreover, B. **subtilis** hemY did
not substitute for hemF hemN deficiency in S. typhimurium. These results
indicate the absence of hemF and suggest the presence of a second hemN-like gene in B. **subtilis**.

=> D HIS

(FILE 'HOME' ENTERED AT 12:48:41 ON 24 MAY 2002)

FILE 'REGISTRY' ENTERED AT 12:49:49 ON 24 MAY 2002
E "SPOIIIE"/CN 25
L1 1 S E4
E "SPOOJ"/CN 25
L2 1 S E4

INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI,
BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,
CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB,
DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 12:53:52 ON
24 MAY 2002

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          SEA SPOIIIE
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          1  FILE AQUASCI
         47  FILE BIOSIS
          6  FILE BIOTECHABS
          6  FILE BIOTECHDS
         28  FILE BIOTECHNO
          1  FILE CABA
         50  FILE CAPLUS
          1  FILE CEABA-VTB
          1  FILE CONFSCI
          6  FILE DGENE
         30  FILE EMBASE
         23  FILE ESBIOBASE
          3  FILE FSTA
         54  FILE GENBANK
          8  FILE IFIPAT
          5  FILE JICST-EPLUS
         34  FILE LIFESCI
         37  FILE MEDLINE
          9  FILE PASCAL
          2  FILE PROMT
         34  FILE SCISEARCH
          8  FILE TOXCENTER
         17  FILE USPATFULL
          5  FILE WPIDS
          5  FILE WPINDEX
L3          QUE SPOIIIE
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          SEA SPOOJ
          ---------
         27  FILE BIOSIS
          4  FILE BIOTECHABS
          4  FILE BIOTECHDS
         16  FILE BIOTECHNO
          1  FILE CABA
         19  FILE CAPLUS
         15  FILE EMBASE
         10  FILE ESBIOBASE
          1  FILE FEDRIP
          1  FILE FSTA
         11  FILE GENBANK
          2  FILE IFIPAT
          1  FILE JICST-EPLUS
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         13  FILE SCISEARCH
          8  FILE TOXCENTER
          9  FILE USPATFULL
          2  FILE WPIDS
          2  FILE WPINDEX
L4          QUE SPOOJ
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   FILE 'BIOSIS, CAPLUS' ENTERED AT 12:55:42 ON 24 MAY
2002
L5        97 S SPOIIIE
L6        46 S SPOOJ
L7         3 S L5 AND L6
L8         3 DUP REM L7 (0 DUPLICATES REMOVED)

   FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 13:26:26 ON
24 MAY 2002
L9     45878 S REPORTER GENE
L10   317475 S COMPLEMENTA?
L11     2166 S L9 AND L10
L12      822 S L9(P)L10
L13     6401 S SIGMA FACTOR
L14     2900 S SIGMA F
L15        0 S L12 AND L14
L16      400 DUP REM L12 (422 DUPLICATES REMOVED)

   FILE 'REGISTRY' ENTERED AT 13:31:57 ON 24 MAY 2002
          E "PROKARYOTE"/CN 25
          E "BACTERIUM"/CN 25

   FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 13:33:15 ON
24 MAY 2002
L17      400 S L16
L18    70987 S SUBTILIS
L19        4 S L17 AND L18
L20   556256 S COMPLEMENT?
L21  3739694 S FUNCTION?
L22        0 S L20(W)L21
L23     4121 S L20(A)L21
L24      106 S L18 AND L23
L25       46 DUP REM L24 (60 DUPLICATES REMOVED)
L26       36 S L25 NOT PY>1998
L27       38 S L9 AND L23
L28       17 DUP REM L27 (21 DUPLICATES REMOVED)

=> LOG HOLD
COST IN U.S. DOLLARS                SINCE FILE    TOTAL
                                    ENTRY  SESSION
FULL ESTIMATED COST                   80.73   136.27

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE    TOTAL
                                    ENTRY  SESSION
CA SUBSCRIBER PRICE                   -2.48   -3.10

 SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 14:23:06 ON 24
MAY 2002

Connecting via Winsock to STN



Welcome to STN International!  Enter x:x

LOGINID:SSSPTA1636DXS

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'MEDLINE, BIOSIS, CAPLUS' AT
14:59:05 ON 24 MAY 2002
FILE 'MEDLINE' ENTERED AT 14:59:05 ON 24 MAY 2002
FILE 'BIOSIS' ENTERED AT 14:59:05 ON 24 MAY 2002
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FILE 'CAPLUS' ENTERED AT 14:59:05 ON 24 MAY 2002
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS                SINCE FILE    TOTAL
                                    ENTRY  SESSION
FULL ESTIMATED COST                   80.73   136.27

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE    TOTAL
                                    ENTRY  SESSION
CA SUBSCRIBER PRICE                   -2.48   -3.10

=> d his

   (FILE 'HOME' ENTERED AT 12:48:41 ON 24 MAY 2002)

   FILE 'REGISTRY' ENTERED AT 12:49:49 ON 24 MAY 2002
          E "SPOIIIE"/CN 25
L1         1 S E4
          E "SPOOJ"/CN 25
L2         1 S E4

   INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS,
AGRICOLA, ANABSTR, AQUASCI,
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BIOTECHDS, BIOTECHNO, CABA,
   CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI,
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CROPB, CROPU, DDFB,
DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...'
ENTERED AT 12:53:52 ON
24 MAY 2002
SEA SPOIIIE
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1 FILE AQUASCI
47 FILE BIOSIS
6 FILE BIOTECHABS
6 FILE BIOTECHDS
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L3 QUE SPOIIIE

SEA SPOOJ
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27 FILE BIOSIS
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L4 QUE SPOOJ

FILE 'BIOSIS, CAPLUS' ENTERED AT 12:55:42 ON 24 MAY 2002
L5 97 S SPOIIIE
L6 46 S SPOOJ
L7 3 S L5 AND L6
L8 3 DUP REM L7 (0 DUPLICATES REMOVED)

FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 13:26:26 ON 24 MAY 2002
L9 45878 S REPORTER GENE
L10 317475 S COMPLEMENTA?
L11 2166 S L9 AND L10
L12 822 S L9(P)L10
L13 6401 S SIGMA FACTOR
L14 2900 S SIGMA F
L15 0 S L12 AND L14
L16 400 DUP REM L12 (422 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 13:31:57 ON 24 MAY 2002
E "PROKARYOTE"/CN 25
E "BACTERIUM"/CN 25

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 13:33:15 ON 24 MAY 2002
L17 400 S L16
L18 70987 S SUBTILIS
L19 4 S L17 AND L18
L20 556256 S COMPLEMENT?
L21 3739694 S FUNCTION?
L22 0 S L20(W)L21
L23 4121 S L20(A)L21
L24 106 S L18 AND L23
L25 46 DUP REM L24 (60 DUPLICATES REMOVED)
L26 36 S L25 NOT PY>1998
L27 38 S L9 AND L23
L28 17 DUP REM L27 (21 DUPLICATES REMOVED)

=> l20(3a)l21
L20(3A)L21 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l20(3a)l21
L29 9901 L20(3A) L21

=> s spoiiie?
L30 137 SPOIIIE?

=> s l29 and l30
L31 0 L29 AND L30

=> s spooj
L32 56 SPOOJ

=> s l29 and l32
L33 0 L29 AND L32

=> s spoiii
L34 20 SPOIII

=> s antibiotic?
L35 458251 ANTIBIOTIC?

=> s l32 and l35
L36 2 L32 AND L35

=> d ti 1-2

L36 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Bacillus strain and **antibiotic** screening method.

L36 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
TI Mutant Bacillus strain and **antibiotic** screening method

=> d ibib ab 1-2

L36 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:278073 BIOSIS
DOCUMENT NUMBER: PREV200200278073
TITLE: Bacillus strain and **antibiotic** screening method.
AUTHOR(S): Errington, Jeffery (1); Wu, Ling Juan
CORPORATE SOURCE: (1) Oxford UK
ASSIGNEE: ISIS Innovation Limited, Oxford, UK
PATENT INFORMATION: US 6350587 February 26, 2002
SOURCE: Official Gazette of the United States Patent and

Trademark
Office Patents, (Feb. 26, 2002) Vol. 1255, No. 4, pp. No Pagination. http://www.uspto.gov/web/menu/patdata.html. e-file.
ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
AB A Bacillus strain has a chromosome with the following modifications: a mutation of a spoIIIE gene which blocks transfer of the prespore chromosome; a mutation which prevents loss of **SpoOJ** function from blocking sporulation; a first reporter gene dependent on sigmaF factor and placed at a location where impaired **SpoOJ** function leads to increased trapping in the prespore; and a second reporter gene having a promoter which is dependent on sigmaF factor and where impaired **SpoOJ** function leads to reduced trapping in the prespore. The strain is useful in a method of screening for putative **antibiotics** .

L36 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:406093 CAPLUS
DOCUMENT NUMBER: 129:64024
TITLE: Mutant Bacillus strain and **antibiotic** screening method
INVENTOR(S): Errington, Jeffery; Wu, Ling Juan
PATENT ASSIGNEE(S): Isis Innovation Ltd., UK; Errington, Jeffery; Wu, Ling Juan
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9826087	A1	19980618	WO 1997-GB3401	19971210
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 944734	A1	19990929	EP 1997-947811	19971210
R: BE, DE, ES, FR, GB, IT, NL				
JP 2001505776	T2	20010508	JP 1998-526366	19971210
US 6350587	B1	20020226	US 1999-319777	19990611
US 2002058297	A1	20020516	US 2001-26828	20011227

PRIORITY APPLN. INFO.: GB 1996-25825 A 19961212
WO 1997-GB3401 W 19971210
US 1999-319777 A3 19990611
AB A Bacillus strain has a chromosome with the following modifications: a mutation of a spoIIIE gene which blocks transfer of the prespore chromosome; a mutation which prevents loss of **SpoOJ** function from blocking sporulation; a first reporter gene dependent on .sigma.F factor and placed at a location where impaired **SpoOJ** function leads to increased trapping in the prespore; and a second reporter gene having a promoter which is dependent on .sigma.F factor and where impaired **SpoOJ** function leads to reduced trapping in the prespore. The strain is useful in a method of screening for putative **antibiotics** . The reporter genes lacZ and gus encode different detectable enzymes, .beta.-galactosidase and .beta.-glucuronidase, resp. The Bacillus bacteria is killed by contact with a substance which inhibits SpOJ function.

=> d ti l32 1-10

L32 ANSWER 1 OF 56 MEDLINE
TI Analyzing DNA strand compositional asymmetry to identify candidate replication origins of Borrelia burgdorferi linear and circular plasmids.

L32 ANSWER 2 OF 56 MEDLINE
TI Penicillin-binding protein-related factor A is required for proper chromosome segregation in Bacillus subtilis.

L32 ANSWER 3 OF 56 MEDLINE
TI Gene organization in the trxA/B-oriC region of the Streptomyces coelicolor chromosome and comparison with other eubacteria.

L32 ANSWER 4 OF 56 MEDLINE
TI DNA polymerase template switching at specific sites on the phi29 genome causes the in vivo accumulation of subgenomic phi29 DNA molecules.

L32 ANSWER 5 OF 56 MEDLINE
TI A Bacillus subtilis gene-encoding protein homologous to eukaryotic SMC motor protein is necessary for chromosome partition.

L32 ANSWER 6 OF 56 MEDLINE
TI Organization around the dnaA gene of Streptococcus pneumoniae.

L32 ANSWER 7 OF 56 MEDLINE
TI Direct evidence for active segregation of oriC regions of the Bacillus subtilis chromosome and co-localization with the **SpoOJ** partitioning protein.

L32 ANSWER 8 OF 56 MEDLINE
TI Roa307, a protein encoded on Coxiella burnetii plasmid QpH1, shows homology to proteins encoded in the replication origin region of bacterial chromosomes.

L32 ANSWER 9 OF 56 MEDLINE
TI spo0J is required for normal chromosome segregation as well as the initiation of sporulation in Bacillus subtilis.

L32 ANSWER 10 OF 56 MEDLINE
TI Cloning of the Bacillus subtilis recF gene.

=> d ibib ab 9
2 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET SIZE
The answer numbers requested are not in the answer set.
ENTER ANSWER NUMBER OR RANGE (1):end

=> d ibib ab l32 9

L32 ANSWER 9 OF 56 MEDLINE
ACCESSION NUMBER: 94350812 MEDLINE
DOCUMENT NUMBER: 94350812 PubMed ID: 8071208
TITLE: spo0J is required for normal chromosome segregation as well as the initiation of sporulation in Bacillus subtilis.
AUTHOR: Ireton K; Gunther N W 4th; Grossman A D
CORPORATE SOURCE: Department of Biology, Massachusetts Institute of Technology, Cambridge 02139.
CONTRACT NUMBER: GM41934 (NIGMS)
SOURCE: JOURNAL OF BACTERIOLOGY, (1994 Sep) 176 (17) 5320-9.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 199409
ENTRY DATE: Entered STN: 19941006
Last Updated on STN: 19970203
Entered Medline: 19940928

AB The spo0J gene of Bacillus subtilis is required for the initiation of sporulation. We show that the sporulation defect caused by null mutations in spo0J is suppressed by a null mutation in the gene located directly upstream from spo0J, soj (suppressor of spo0J). These results indicate that Soj inhibits the initiation of sporulation and that Spo0J antagonizes that inhibition. Further genetic experiments indicated that Soj ultimately affects sporulation by inhibiting the activation (phosphorylation) of the developmental transcription factor encoded by spo0A. In addition, the temperature-sensitive sporulation phenotype caused by the ftsA279 (spoIIN279) mutation was partly suppressed by the soj null mutation, indicating that FtsA might also affect the activity of Soj. Soj and Spo0J are known to be similar in sequence to a family of proteins involved in plasmid partitioning, including ParA and ParB of prophage P1, SopA and SopB of F, and IncC and KorB of RK2, spo0J was found to be required for normal chromosome partitioning as well as for sporulation. spo0J null mutants produced a significant proportion of anucleate cells during vegetative growth. The dual functions of Spo0J could provide a mechanism for regulating the initiation of sporulation in response to activity of the chromosome partition machinery.

=> log hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	98.44	153.98

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
CA SUBSCRIBER PRICE -3.10	-3.72

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 15:05:38 ON 24 MAY 2002

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1636DXS

PASSWORD:
* * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'MEDLINE, BIOSIS, CAPLUS' AT 15:33:25 ON 24 MAY 2002
FILE 'MEDLINE' ENTERED AT 15:33:25 ON 24 MAY 2002
FILE 'BIOSIS' ENTERED AT 15:33:25 ON 24 MAY 2002
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FILE 'CAPLUS' ENTERED AT 15:33:25 ON 24 MAY 2002
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	98.44	153.98

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
CA SUBSCRIBER PRICE -3.10	-3.72

=> d his

(FILE 'HOME' ENTERED AT 12:48:41 ON 24 MAY 2002)

FILE 'REGISTRY' ENTERED AT 12:49:49 ON 24 MAY 2002
E "SPOIIIE"/CN 25
L1 1 S E4
E "SPOOJ"/CN 25
L2 1 S E4

INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 12:53:52 ON 24 MAY 2002

SEA SPOIIIE

1	FILE AQUASCI
47	FILE BIOSIS
6	FILE BIOTECHABS
6	FILE BIOTECHDS
28	FILE BIOTECHNO
1	FILE CABA
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34	FILE LIFESCI
37	FILE MEDLINE
9	FILE PASCAL
2	FILE PROMT
34	FILE SCISEARCH
8	FILE TOXCENTER
17	FILE USPATFULL
5	FILE WPIDS
5	FILE WPINDEX

L3 QUE SPOIIIE

SEA SPOOJ

27	FILE BIOSIS
4	FILE BIOTECHABS
4	FILE BIOTECHDS
16	FILE BIOTECHNO
1	FILE CABA
19	FILE CAPLUS
15	FILE EMBASE
10	FILE ESBIOBASE
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2	FILE PASCAL
13	FILE SCISEARCH
8	FILE TOXCENTER
9	FILE USPATFULL

2 FILE WPIDS
2 FILE WPINDEX
L4 QUE SPOOJ

FILE 'BIOSIS, CAPLUS' ENTERED AT 12:55:42 ON 24 MAY 2002
L5 97 S SPOIIIE
L6 46 S SPOOJ
L7 3 S L5 AND L6
L8 3 DUP REM L7 (0 DUPLICATES REMOVED)

FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 13:26:26 ON 24 MAY 2002
L9 45878 S REPORTER GENE
L10 317475 S COMPLEMENTA?
L11 2166 S L9 AND L10
L12 822 S L9(P)L10
L13 6401 S SIGMA FACTOR
L14 2900 S SIGMA F
L15 0 S L12 AND L14
L16 400 DUP REM L12 (422 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 13:31:57 ON 24 MAY 2002
E "PROKARYOTE"/CN 25
E "BACTERIUM"/CN 25

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 13:33:15 ON 24 MAY 2002
L17 400 S L16
L18 70987 S SUBTILIS
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L20 556256 S COMPLEMENT?
L21 3739694 S FUNCTION?
L22 0 S L2O(W)L21
L23 4121 S L20(A)L21
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L26 36 S L25 NOT PY>1998
L27 38 S L9 AND L23
L28 17 DUP REM L27 (21 DUPLICATES REMOVED)
L29 9901 S L20(3A)L21
L30 137 S SPOIIIE?
L31 0 S L29 AND L30
L32 56 S SPOOJ
L33 0 S L29 AND L32
L34 20 S SPOIII
L35 458251 S ANTIBIOTIC?
L36 2 S L32 AND L35

=> s divib or ftsq
L37 316 DIVIB OR FTSQ

=> s divic
L38 33 DIVIC

=> s diviva
L39 44 DIVIVA

=> s ftsa
L40 506 FTSA

=> s ftsl
L41 98 FTSL

=> s mrar
L42 84 MRAR

=> s ftsz
L43 1544 FTSZ

=> s pbpb
L44 284 PBPB

=> s l37 or l38 or l39 or l40 or l41 or l42 or l43 or l44
L45 2209 L37 OR L38 OR L39 OR L40 OR L41 OR L42 OR L43 OR L44

=> s l45 not l43
L46 665 L45 NOT L43

=> s l46(p)l29
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PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH FIELD CODE - 'AND' OPERATOR ASSUMED 'L158(P)L90'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH FIELD CODE - 'AND' OPERATOR ASSUMED 'L159(P)L91'
L47 0 L46(P) L29

=> s l46 and l29
L48 0 L46 AND L29

=> s l43 and l29
L49 0 L43 AND L29

=> s genetic? complementat?
L50 13781 GENETIC? COMPLEMENTAT?

=> s l46 and l50
L51 15 L46 AND L50

=> s l43 and l50
L52 24 L43 AND L50

=> s l51 or l52
L53 39 L51 OR L52

=> dup rem l53
PROCESSING COMPLETED FOR L53
L54 29 DUP REM L53 (10 DUPLICATES REMOVED)

=> d ti so 1-29

L54 ANSWER 1 OF 29 MEDLINE
TI HscA is involved in the dynamics of **FtsZ**-ring formation in Escherichia coli K12.
SO GENES TO CELLS, (2001 Sep) 6 (9) 803-14.
Journal code: 9607379. ISSN: 1356-9597.

L54 ANSWER 2 OF 29 MEDLINE
TI **pbpB**, a gene coding for a putative penicillin-binding protein, is required for aerobic nitrogen fixation in the cyanobacterium Anabaena
sp. strain PCC7120.
SO JOURNAL OF BACTERIOLOGY, (2001 Jan) 183 (2) 628-36.
Journal code: HH3. ISSN: 0021-9193.

L54 ANSWER 3 OF 29 MEDLINE DUPLICATE 1
TI Two new loci affecting cell division identified as suppressors of an **ftsQ**-null mutation in Streptomyces coelicolor A3(2).
SO FEMS MICROBIOLOGY LETTERS, (2001 Aug 21) 202 (2) 251-6.
Journal code: FML; 7705721. ISSN: 0378-1097.

L54 ANSWER 4 OF 29 MEDLINE
TI Arrest of cell division and nucleoid partition by genetic alterations in
the sliding clamp of the replicase and in DnaA.
SO Mol Genet Genomics, (2001 Oct) 266 (2) 167-79.
Journal code: 101093320. ISSN: 1617-4615.

L54 ANSWER 5 OF 29 MEDLINE
TI whmD is an essential mycobacterial gene required for proper septation and
cell division.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF

AMERICA, (2000 Jul 18) 97 (15) 8554-9.
Journal code: PV3; 7505876. ISSN: 0027-8424.

L54 ANSWER 6 OF 29 MEDLINE
TI Analysis of the essential cell division gene **ftsL** of Bacillus subtilis by mutagenesis and heterologous complementation.
SO JOURNAL OF BACTERIOLOGY, (2000 Oct) 182 (19) 5572-9.
Journal code: HH3. ISSN: 0021-9193.

L54 ANSWER 7 OF 29 MEDLINE
TI Cloning and characterization of **ftsZ** and pyrF from the archaeon Thermoplasma acidophilum.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (2000 Sep 7) 275 (3) 936-45.
Journal code: 9Y8; 0372516. ISSN: 0006-291X.

L54 ANSWER 8 OF 29 MEDLINE
TI Pea chloroplast **FtsZ** can form multimers and correct the thermosensitive defect of an Escherichia coli **ftsZ** mutant.
SO MOLECULAR AND GENERAL GENETICS, (2000 Mar) 263 (2) 213-21.
Journal code: NGP; 0125036. ISSN: 0026-8925.

L54 ANSWER 9 OF 29 MEDLINE
TI Negative regulatory role of the Escherichia coli hfq gene in cell division.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1999 Dec 20) 266 (2) 579-83.
Journal code: 9Y8; 0372516. ISSN: 0006-291X.

L54 ANSWER 10 OF 29 MEDLINE
TI Septal localization of FtsQ, an essential cell division protein in Escherichia coli.
SO JOURNAL OF BACTERIOLOGY, (1999 Jan) 181 (2) 521-30.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 11 OF 29 MEDLINE
TI A murC gene from coryneform bacteria.
SO APPLIED MICROBIOLOGY AND BIOTECHNOLOGY, (1999 Feb) 51 (2) 223-8.
Journal code: AMC; 8406612. ISSN: 0175-7598.

L54 ANSWER 12 OF 29 MEDLINE
TI Salmonella typhimurium encodes an SdiA homolog, a putative quorum sensor of the LuxR family, that regulates genes on the virulence plasmid.
SO JOURNAL OF BACTERIOLOGY, (1998 Mar) 180 (5) 1185-93.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 13 OF 29 MEDLINE
TI Characterization of **ftsZ**, the cell division gene of Buchnera aphidicola (endosymbiont of aphids) and detection of the product.
SO CURRENT MICROBIOLOGY, (1998 Feb) 36 (2) 85-9.
Journal code: BMW; 7808448. ISSN: 0343-8651.

L54 ANSWER 14 OF 29 MEDLINE
TI Domain-swapping analysis of FtsI, **FtsL**, and **FtsQ**, bitopic membrane proteins essential for cell division in Escherichia coli.
SO JOURNAL OF BACTERIOLOGY, (1997 Aug) 179 (16) 5094-103.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 15 OF 29 MEDLINE DUPLICATE 2
TI Identification, characterization, and chromosomal organization of cell division cycle genes in Caulobacter crescentus.
SO JOURNAL OF BACTERIOLOGY, (1997 Apr) 179 (7) 2169-80.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 16 OF 29 MEDLINE
TI ftsW is an essential cell-division gene in Escherichia coli.
SO MOLECULAR MICROBIOLOGY, (1997 Jun) 24 (6) 1263-73.
Journal code: MOM; 8712028. ISSN: 0950-382X.

L54 ANSWER 17 OF 29 MEDLINE
TI Requirement of topoisomerase IV parC and parE genes for cell cycle progression and developmental regulation in Caulobacter crescentus.
SO MOLECULAR MICROBIOLOGY, (1997 Dec) 26 (5) 897-910.
Journal code: MOM; 8712028. ISSN: 0950-382X.

L54 ANSWER 18 OF 29 MEDLINE
TI Characterization of a five-gene cluster required for the biogenesis of type 4 fimbriae in Pseudomonas aeruginosa.
SO MOLECULAR MICROBIOLOGY, (1995 May) 16 (3) 497-508.
Journal code: MOM; 8712028. ISSN: 0950-382X.

L54 ANSWER 19 OF 29 MEDLINE
TI Cloning and sequencing of the cell division gene **pbpB**, which encodes penicillin-binding protein 2B in Bacillus subtilis.
SO JOURNAL OF BACTERIOLOGY, (1993 Dec) 175 (23) 7604-16.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 20 OF 29 MEDLINE
TI Escherichia coli **mraR** gene involved in cell growth and division.
SO JOURNAL OF BACTERIOLOGY, (1992 Dec) 174 (23) 7841-3.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 21 OF 29 MEDLINE
TI The rcsB gene, a positive regulator of colanic acid biosynthesis in Escherichia coli, is also an activator of **ftsZ** expression.
SO JOURNAL OF BACTERIOLOGY, (1992 Jun) 174 (12) 3964-71.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 22 OF 29 MEDLINE
TI An amino-proximal domain required for the localization of **FtsQ** in the cytoplasmic membrane, and for its biological function in Escherichia coli.
SO MOLECULAR MICROBIOLOGY, (1992 Mar) 6 (6) 715-22.
Journal code: MOM; 8712028. ISSN: 0950-382X.

L54 ANSWER 23 OF 29 MEDLINE
TI Cloning and characterization of a Rhizobium meliloti homolog of the Escherichia coli cell division gene **ftsZ**.
SO JOURNAL OF BACTERIOLOGY, (1991 Sep) 173 (18) 5822-30.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 24 OF 29 MEDLINE
TI New mutations fts-36, lts-33, and ftsW clustered in the mra region of the Escherichia coli chromosome induce thermosensitive cell growth and division.
SO JOURNAL OF BACTERIOLOGY, (1989 Oct) 171 (10) 5523-30.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 25 OF 29 MEDLINE
TI Cell division control in Escherichia coli K-12: some properties of the ftsZ84 mutation and suppression of this mutation by the product of a newly identified gene.
SO JOURNAL OF BACTERIOLOGY, (1988 Sep) 170 (9) 4338-42.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 26 OF 29 MEDLINE DUPLICATE 3
TI Further evidence for overlapping transcriptional units in an Escherichia coli cell envelope-cell division gene cluster: DNA sequence and transcriptional organization of the ddl ftsQ region.
SO JOURNAL OF BACTERIOLOGY, (1986 Sep) 167 (3) 809-17.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 27 OF 29 MEDLINE DUPLICATE 4
TI DNA sequence and transcriptional organization of essential cell

division
genes ftsQ and ftsA of Escherichia coli: evidence for overlapping transcriptional units.
SO JOURNAL OF BACTERIOLOGY, (1984 Nov) 160 (2) 546-55.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 28 OF 29 MEDLINE
TI Coupling of DNA replication and cell division: sulB is an allele of **ftsZ**.
SO JOURNAL OF BACTERIOLOGY, (1983 Jun) 154 (3) 1339-46.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L54 ANSWER 29 OF 29 MEDLINE DUPLICATE 5
TI Involvement of the **ftsA** gene product in late stages of the Escherichia coli cell cycle.
SO JOURNAL OF BACTERIOLOGY, (1980 Feb) 141 (2) 806-13.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

=> d his

(FILE 'HOME' ENTERED AT 12:48:41 ON 24 MAY 2002)

FILE 'REGISTRY' ENTERED AT 12:49:49 ON 24 MAY 2002
E "SPOIIIE"/CN 25
L1 1 S E4
E "SPOOJ"/CN 25
L2 1 S E4

INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI,
BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,
CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB,
DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 12:53:52 ON
24 MAY 2002
SEA SPOIIIE
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1 FILE AQUASCI
47 FILE BIOSIS
6 FILE BIOTECHABS
6 FILE BIOTECHDS
28 FILE BIOTECHNO
1 FILE CABA
50 FILE CAPLUS
1 FILE CEABA-VTB
1 FILE CONFSCI
6 FILE DGENE
30 FILE EMBASE
23 FILE ESBIOBASE
3 FILE FSTA
54 FILE GENBANK
8 FILE IFIPAT
5 FILE JICST-EPLUS
34 FILE LIFESCI
37 FILE MEDLINE
9 FILE PASCAL
2 FILE PROMT
34 FILE SCISEARCH
8 FILE TOXCENTER
17 FILE USPATFULL
5 FILE WPIDS
5 FILE WPINDEX
L3 QUE SPOIIIE

SEA SPOOJ
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27 FILE BIOSIS
4 FILE BIOTECHABS
4 FILE BIOTECHDS
16 FILE BIOTECHNO
1 FILE CABA
19 FILE CAPLUS
15 FILE EMBASE
10 FILE ESBIOBASE
1 FILE FEDRIP
1 FILE FSTA
11 FILE GENBANK
2 FILE IFIPAT
1 FILE JICST-EPLUS
13 FILE LIFESCI
10 FILE MEDLINE
2 FILE PASCAL
13 FILE SCISEARCH
8 FILE TOXCENTER
9 FILE USPATFULL
2 FILE WPIDS
2 FILE WPINDEX
L4 QUE SPOOJ

FILE 'BIOSIS, CAPLUS' ENTERED AT 12:55:42 ON 24 MAY 2002
L5 97 S SPOIIIE
L6 46 S SPOOJ
L7 3 S L5 AND L6
L8 3 DUP REM L7 (0 DUPLICATES REMOVED)

FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 13:26:26 ON 24 MAY 2002
L9 45878 S REPORTER GENE
L10 317475 S COMPLEMENTA?
L11 2166 S L9 AND L10
L12 822 S L9(P)L10
L13 6401 S SIGMA FACTOR
L14 2900 S SIGMA F
L15 0 S L12 AND L14
L16 400 DUP REM L12 (422 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 13:31:57 ON 24 MAY 2002
E "PROKARYOTE"/CN 25
E "BACTERIUM"/CN 25

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 13:33:15 ON 24 MAY 2002
L17 400 S L16
L18 70987 S SUBTILIS
L19 4 S L17 AND L18
L20 556256 S COMPLEMENT?
L21 3739694 S FUNCTION?
L22 0 S L20(W)L21
L23 4121 S L20(A)L21
L24 106 S L18 AND L23
L25 46 DUP REM L24 (60 DUPLICATES REMOVED)
L26 36 S L25 NOT PY>1998
L27 38 S L9 AND L23
L28 17 DUP REM L27 (21 DUPLICATES REMOVED)
L29 9901 S L20(3A)L21
L30 137 S SPOIIIE?
L31 0 S L29 AND L30
L32 56 S SPOOJ
L33 0 S L29 AND L32
L34 20 S SPOIII
L35 458251 S ANTIBIOTIC?
L36 2 S L32 AND L35
L37 316 S DIVIB OR FTSQ
L38 33 S DIVIC
L39 44 S DIVIVA
L40 506 S FTSA
L41 98 S FTSL
L42 84 S MRAR
L43 1544 S FTSZ
L44 284 S PBPB
L45 2209 S L37 OR L38 OR L39 OR L40 OR L41 OR L42 OR L43 OR L44
L46 665 S L45 NOT L43

L47 0 S L46(P)L29
L48 0 S L46 AND L29
L49 0 S L43 AND L29
L50 13781 S GENETIC? COMPLEMENTAT?
L51 15 S L46 AND L50
L52 24 S L43 AND L50
L53 39 S L51 OR L52
L54 29 DUP REM L53 (10 DUPLICATES REMOVED)

=> s l30 or l32
L55 190 L30 OR L32

=> s l55 and l50
L56 7 L55 AND L50

=> dup rem l56
PROCESSING COMPLETED FOR L56
L57 7 DUP REM L56 (0 DUPLICATES REMOVED)

=> d ti so 1-7

L57 ANSWER 1 OF 7 MEDLINE
TI Penicillin-binding protein-related factor A is required for proper chromosome segregation in Bacillus subtilis.
SO JOURNAL OF BACTERIOLOGY, (2000 Mar) 182 (6) 1650-8.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L57 ANSWER 2 OF 7 MEDLINE
TI The putative DNA translocase **SpoIIIE** is required for sporulation of the symmetrically dividing coccal species Sporosarcina ureae.
SO MOLECULAR MICROBIOLOGY, (2000 Feb) 35 (3) 612-22.
Journal code: MOM; 8712028. ISSN: 0950-382X.

L57 ANSWER 3 OF 7 MEDLINE
TI DNA polymerase template switching at specific sites on the phi29 genome
causes the in vivo accumulation of subgenomic phi29 DNA molecules.
SO MOLECULAR MICROBIOLOGY, (1998 Aug) 29 (3) 787-98.
Journal code: MOM; 8712028. ISSN: 0950-382X.

L57 ANSWER 4 OF 7 MEDLINE
TI A mutation in the ftsK gene of Escherichia coli affects cell-cell separation, stationary-phase survival, stress adaptation, and expression
of the gene encoding the stress protein UspA.
SO JOURNAL OF BACTERIOLOGY, (1997 Sep) 179 (18) 5878-83.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L57 ANSWER 5 OF 7 MEDLINE
TI A new Escherichia coli cell division gene, ftsK.
SO JOURNAL OF BACTERIOLOGY, (1995 Nov) 177 (21) 6211-22.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L57 ANSWER 6 OF 7 MEDLINE
TI Cloning and dependence pattern of the sporulation operon spoVH.
SO JOURNAL OF BACTERIOLOGY, (1988 Feb) 170 (2) 802-9.
Journal code: HH3; 2985120R. ISSN: 0021-9193.

L57 ANSWER 7 OF 7 MEDLINE
TI Cloning of the Bacillus subtilis recF gene.
SO GENE, (1985) 38 (1-3) 139-44.
Journal code: FOP; 7706761. ISSN: 0378-1119.

=> d ibib ab 7,6,5

L57 ANSWER 7 OF 7 MEDLINE
ACCESSION NUMBER: 86056970 MEDLINE
DOCUMENT NUMBER: 86056970 PubMed ID: 3934046
TITLE: Cloning of the Bacillus subtilis recF gene.
AUTHOR: Lampe M F; Bott K F
CONTRACT NUMBER: GM 07092 (NIGMS)
GM 26399 (NIGMS)
SOURCE: GENE, (1985) 38 (1-3) 139-44.
Journal code: FOP; 7706761. ISSN: 0378-1119.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198601
ENTRY DATE: Entered STN: 19900321
Last Updated on STN: 20000303
Entered Medline: 19860121
AB A cloned DNA fragment from the ori region of the Bacillus subtilis chromosome permits three separate recF mutants to grow in the presence of
mitomycin C (MC) and survive after ultraviolet (UV) exposure. The recF
gene has been localized to a 2.3-kb EcoRI-SalI restriction fragment on the
cloned sequences. This fragment directs expression of a 34.7-kDal protein
in Escherichia coli maxicells. Cloned DNA containing the recF gene does
not complement or rescue recL, recM or **spoOJ** B. subtilis
mutants. The B. subtilis recF gene also does not complement any of several
of the E. coli recombination-deficient (Rec-) mutants tested.

L57 ANSWER 6 OF 7 MEDLINE
ACCESSION NUMBER: 88115183 MEDLINE
DOCUMENT NUMBER: 88115183 PubMed ID: 2828324
TITLE: Cloning and dependence pattern of the sporulation operon
spoVH.
AUTHOR: Cutting S M; Mandelstam J
CORPORATE SOURCE: Department of Biochemistry, University of Oxford, United
Kingdom.
SOURCE: JOURNAL OF BACTERIOLOGY, (1988 Feb) 170 (2) 802-9.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198803
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19900308
Entered Medline: 19880310
AB The spoVH locus, involved in the sporulation of Bacillus subtilis, was
cloned in derivatives of the temperate bacteriophage luminal diameter 105.
Two recombinant phages were obtained which contained 4.2 kilobases of
chromosomal DNA. Both phages only partially complemented a mutation in the
spoVH operon, spoVH516. Nevertheless, analysis of the cloned locus with
integrational plasmids showed that the complete operon had been cloned. A
spoVH'-lacZ transcriptional fusion was constructed, and this indicated
that the spoVH operon was expressed 2.25 h after the start of sporulation.
The distribution of beta-galactosidase in sporulating cells containing a
spoVH'-lacZ fusion showed that spoVH was expressed in the spore
compartment; lac fusion experiments were also used to study spoVH
expression in the presence of other sporulation mutations. Expression of
spoVH was prevented by mutations in any of the stage 0 or stage II loci
and also by mutations in spoIIIA, spoIIIB, and **spoIIIE**. A
similar pattern of dependence was found previously for the expression of

spoVA, which is also expressed in the spore compartment.

L57 ANSWER 5 OF 7 MEDLINE
ACCESSION NUMBER: 96042098 MEDLINE
DOCUMENT NUMBER: 96042098 PubMed ID: 7592387
TITLE: A new Escherichia coli cell division gene, ftsK.
AUTHOR: Begg K J; Dewar S J; Donachie W D
CORPORATE SOURCE: Institute of Cell and Molecular Biology, University of
Edinburgh, Scotland.
SOURCE: JOURNAL OF BACTERIOLOGY, (1995 Nov) 177 (21) 6211-22.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-Z49932
ENTRY MONTH: 199512
ENTRY DATE: Entered STN: 19960124
Last Updated on STN: 19960124
Entered Medline: 19951207
AB A mutation in a newly discovered Escherichia coli cell division gene,
ftsK, causes a temperature-sensitive late-stage block in division but does
not affect chromosome replication or segregation. This defect is
specifically suppressed by deletion of dacA, coding for the peptidoglycan
DD-carboxypeptidase, PBP 5. FtsK is a large polypeptide (147 kDa)
consisting of an N-terminal domain with several predicted
membrane-spanning regions, a proline-glutamine-rich domain, and a
C-terminal domain with a nucleotide-binding consensus sequence. FtsK has
extensive sequence identity with a family of proteins from a wide variety
of prokaryotes and plasmids. The plasmid proteins are required for
intercellular DNA transfer, and one of the bacterial proteins (the
SpoIIIE protein of Bacillus subtilis) has also been implicated in
intracellular chromosomal DNA transfer.

=> d ibib ab l54 28,25,23,20,16,14

L54 ANSWER 28 OF 29 MEDLINE
ACCESSION NUMBER: 83213158 MEDLINE
DOCUMENT NUMBER: 83213158 PubMed ID: 6343351
TITLE: Coupling of DNA replication and cell division: sulB is an
allele of **ftsZ**.
AUTHOR: Lutkenhaus J F
CONTRACT NUMBER: GM-29764 (NIGMS)
SOURCE: JOURNAL OF BACTERIOLOGY, (1983 Jun) 154 (3) 1339-46.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198307
ENTRY DATE: Entered STN: 19900319
Last Updated on STN: 19970203
Entered Medline: 19830729
AB Treatments that damage DNA in Escherichia coli result in the inhibition of
cell division. This inhibition is controlled by the lexA-recA regulatory
circuit and can be specifically uncoupled by the mutations sulA (sfiA) and
sulB (sfiB), which map at 21 and 2 min, respectively. Presently it is
thought that sulA codes for an inducible inhibitor of cell division, the
expression of which is controlled directly by the lexA repressor. In this
report, it is shown that sulB is an allele of **ftsZ**, an essential
cell division gene. A sulB mutation leads to an altered **ftsZ**
gene product which is slightly thermosensitive and has an altered mobility
on polyacrylamide gels. It is suggested that the altered **ftsZ**
gene product is resistant to the sulA inhibitor, thus permitting cell
division after induction of the SOS response. It is also shown that an
increase in the gene dosage of **ftsZ** delays the onset of
filamentation after SOS induction.

L54 ANSWER 25 OF 29 MEDLINE
ACCESSION NUMBER: 88314939 MEDLINE
DOCUMENT NUMBER: 88314939 PubMed ID: 2842315
TITLE: Cell division control in Escherichia coli K-12: some
properties of the ftsZ84 mutation and suppression of this
mutation by the product of a newly identified gene.
AUTHOR: Phoenix P; Drapeau G R
CORPORATE SOURCE: Department of Microbiology and Immunology, Universite de
Montreal, Quebec, Canada.
SOURCE: JOURNAL OF BACTERIOLOGY, (1988 Sep) 170 (9) 4338-42.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198810
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19900308
Entered Medline: 19881006
AB The Fts proteins play an important role in the control of cell division in
Escherichia coli. These proteins, which possibly form a functional
complex, are encoded by genes that form an operon. In this study, we
examined the properties of the temperature-sensitive mutation ftsZ84
harbored by low- or high-copy-number plasmids. Cells of strain AB1157,
which had the ftsZ84 mutation, did not form colonies on salt-free L agar
at 30 degrees C. When a low-copy-number plasmid containing the ftsZ84
mutation was present in these mutant cells, colony formation was restored
on this medium at 30 degrees C, suggesting that FtsZ84 is probably less
active than the wild-type protein and is therefore limiting in its
capacity to trigger cell divisions. On the other hand, when the ftsZ84
mutation was harbored by the high-copy-number plasmid pBR325, colony
formation was prevented on salt-free L agar plates whether the recipients
were ftsZ84 mutant or parental cells, suggesting that, at high levels,
FtsZ84 acts as a division inhibitor. The fact that colony formation was
also prevented at 42 degrees C indicates that the FtsZ84 protein is not
inactivated at the nonpermissive temperature. The possibility that FtsZ84
is a more efficient division inhibitor than the wild-type **FtsZ**
is discussed. Evidence is also presented showing that a gene adjacent to
mutT codes for a product that, under certain conditions, suppresses the
ftsZ84 mutation.

L54 ANSWER 23 OF 29 MEDLINE
ACCESSION NUMBER: 91358375 MEDLINE
DOCUMENT NUMBER: 91358375 PubMed ID: 1653222
TITLE: Cloning and characterization of a Rhizobium meliloti
homolog of the Escherichia coli cell division gene
ftsZ.
AUTHOR: Margolin W; Corbo J C; Long S R
CORPORATE SOURCE: Department of Biological Sciences, Stanford University,
California 94305-5020.

SOURCE: JOURNAL OF BACTERIOLOGY, (1991 Sep) 173 (18) 5822-30.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-M64126; GENBANK-M64127; GENBANK-M64128;
GENBANK-M64129; GENBANK-M94386; GENBANK-S52988;
GENBANK-S52991; GENBANK-S53819; GENBANK-S53821;
GENBANK-S54126
ENTRY MONTH: 199110
ENTRY DATE: Entered STN: 19911027
Last Updated on STN: 19911027
Entered Medline: 19911009
AB The **ftsZ** gene is essential for initiation of cell division in Escherichia coli and Bacillus subtilis. To begin our studies of division arrest during differentiation of Rhizobium meliloti bacteroids, we isolated a R. meliloti **ftsZ** homolog, ftsZRm. Degenerate primers directed towards a conserved region of **ftsZ** were used to amplify a segment of R. meliloti DNA by polymerase chain reaction, and the product of this reaction was then used to isolate positive clones from a bacteriophage library. The DNA sequence of an open reading frame containing the region of homology indicated that the R. meliloti **FtsZ** protein (FtsZRm) is 50% homologous to the known E. coli and B. subtilis **FtsZ** proteins, but at 590 amino acids (63 kDa), it is predicted to be nearly 50% larger. Strong expression of an approximately 70-kDa labeled protein in a coupled in vitro transcription-translation system supports this prediction. The additional 200 amino acids appear to fall in a single internal domain highly enriched for proline and glutamine residues. When we regulated R. meliloti **ftsZ** (ftsZRm) expression on a high-copy-number plasmid in E. coli with Plac and laclq, cells were smaller than normal in the presence of low FtsZRm levels (with no isopropyl-beta-D-thiogalactopyranoside [IPTG]) and filamentous when FtsZRm was overproduced (with IPTG). These results suggest that low levels of FtsZRm stimulate E. coli cell division, while high levels may be inhibitory.

L54 ANSWER 20 OF 29 MEDLINE
ACCESSION NUMBER: 93077472 MEDLINE
DOCUMENT NUMBER: 93077472 PubMed ID: 1447153
TITLE: Escherichia coli **mraR** gene involved in cell growth and division.
AUTHOR: Ueki M; Wachi M; Jung H K; Ishino F; Matsuhashi M
CORPORATE SOURCE: Institute of Applied Microbiology, University of Tokyo, Japan.
SOURCE: JOURNAL OF BACTERIOLOGY, (1992 Dec) 174 (23) 7841-3.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-L01135; GENBANK-L01136; GENBANK-L01137;
GENBANK-L01138; GENBANK-L01139; GENBANK-L01140;
GENBANK-L01141; GENBANK-M98391; GENBANK-S49802;
GENBANK-Z11768
ENTRY MONTH: 199212
ENTRY DATE: Entered STN: 19930129
Last Updated on STN: 19930129
Entered Medline: 19921230
AB The **mraR** gene, which has a coding frame of 363 bp and lies close to and upstream of the ftsI gene of Escherichia coli, is involved in both cell division and cell lysis. It is thought to function in regulating the two distinct steps of the cell cycle, as two different one-base mutations in this unique gene caused different phenotypical changes in the cell. Comparison of nucleotide sequences of the mutant type **mraR** DNAs with the wild type suggested that filamentation of the cell was caused by a mutation in the putative start codon, whereas lysis of the cell was caused by a mutation which led to a change of one internal glutamate residue to lysine.

L54 ANSWER 16 OF 29 MEDLINE
ACCESSION NUMBER: 97361813 MEDLINE
DOCUMENT NUMBER: 97361813 PubMed ID: 9218774
TITLE: ftsW is an essential cell-division gene in Escherichia coli.
AUTHOR: Boyle D S; Khattar M M; Addinall S G; Lutkenhaus J; Donachie W D
CORPORATE SOURCE: Institute of Cell and Molecular Biology, University of Edinburgh, UK.
CONTRACT NUMBER: R01GM29764 (NIGMS)
SOURCE: MOLECULAR MICROBIOLOGY, (1997 Jun) 24 (6) 1263-73.
Journal code: MOM; 8712028. ISSN: 0950-382X.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199709
ENTRY DATE: Entered STN: 19971008
Last Updated on STN: 19971008
Entered Medline: 19970923
AB In the absence of exogenous promoters, plasmid-mediated complementation of the temperature-sensitive ftsW201 allele requires the presence of the full coding sequence of ftsW plus upstream DNA encompassing the C-terminus of mraY and the full coding sequence of murD. We used molecular and genetic techniques to introduce an insertional inactivation into the chromosomal copy of ftsW, in the presence of the plasmid-borne wild-type ftsW gene under the control of P(BAD). In the absence of arabinose, the ftsW-null strain is not viable, and a shift from arabinose- to glucose-containing liquid medium resulted in a block in division, followed by cell lysis. Immunofluorescence microscopy revealed that in ftsW-null filaments, the **FtsZ** ring is absent in 50-60% of filaments, whilst between one and three Z-rings per filament can be detected in the remainder of the population, with the majority of these containing only one Z-ring per filament. We also demonstrated that the expression of only ftsWS (the smaller of two ftsW open reading frames) from P(BAD) is sufficient for complementation of the ftsW-null allele. We conclude that FtsW is an essential cell-division protein in Escherichia coli, and that it plays a role in the stabilization of the **FtsZ** ring during cell division.

L54 ANSWER 14 OF 29 MEDLINE
ACCESSION NUMBER: 97405907 MEDLINE
DOCUMENT NUMBER: 97405907 PubMed ID: 9260951
TITLE: Domain-swapping analysis of FtsI, **FtsL**, and

FtsQ, bitopic membrane proteins essential for cell division in Escherichia coli.
AUTHOR: Guzman L M; Weiss D S; Beckwith J
CORPORATE SOURCE: Department of Microbiology and Molecular Genetics, Harvard
Medical School, Boston, Massachusetts 02115, USA.
CONTRACT NUMBER: GM38922 (NIGMS)
SOURCE: JOURNAL OF BACTERIOLOGY, (1997 Aug) 179 (16) 5094-103.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199709
ENTRY DATE: Entered STN: 19970922
Last Updated on STN: 19980206
Entered Medline: 19970905
AB FtsI, **FtsL**, and **FtsQ** are three membrane proteins required for assembly of the division septum in the bacterium Escherichia coli. Cells lacking any of these three proteins form long, aseptate filaments that eventually lyse. FtsI, **FtsL**, and **FtsQ** are not homologous but have similar overall structures: a small cytoplasmic domain, a single membrane-spanning segment (MSS), and a large periplasmic domain that probably encodes the primary functional activities of these proteins. The periplasmic domain of FtsI catalyzes transpeptidation and is involved in the synthesis of septal peptidoglycan.
The precise functions of **FtsL** and **FtsQ** are not known.
To ask whether the cytoplasmic domain and MSS of each protein serve only as a membrane anchor or have instead a more sophisticated function, we have used molecular genetic techniques to swap these domains among the three Fts proteins and one membrane protein not involved in cell division, MalF. In the cases of FtsI and **FtsL**, replacement of the cytoplasmic domain and/or MSS resulted in the loss of the ability to support cell division. For **FtsQ**, MSS swaps supported cell division but cytoplasmic domain swaps did not. We discuss several potential interpretations of these results, including that the essential domains of FtsI, **FtsL**, and **FtsQ** have a role in regulating the localization and/or activity of these proteins to ensure that septum formation occurs at the right place in the cell and at the right time during the division cycle.

=> d his

(FILE 'HOME' ENTERED AT 12:48:41 ON 24 MAY 2002)

FILE 'REGISTRY' ENTERED AT 12:49:49 ON 24 MAY 2002
E "SPOIIIE"/CN 25
L1 1 S E4
E "SPOOJ"/CN 25
L2 1 S E4

INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 12:53:52 ON 24 MAY 2002
SEA SPOIIIE
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1 FILE AQUASCI
47 FILE BIOSIS
6 FILE BIOTECHABS
6 FILE BIOTECHDS
28 FILE BIOTECHNO
1 FILE CABA
50 FILE CAPLUS
1 FILE CEABA-VTB
1 FILE CONFSCI
6 FILE DGENE
30 FILE EMBASE
23 FILE ESBIOBASE
3 FILE FSTA
54 FILE GENBANK
8 FILE IFIPAT
5 FILE JICST-EPLUS
34 FILE LIFESCI
37 FILE MEDLINE
9 FILE PASCAL
2 FILE PROMT
34 FILE SCISEARCH
8 FILE TOXCENTER
17 FILE USPATFULL
5 FILE WPIDS
5 FILE WPINDEX
L3 QUE SPOIIIE

SEA SPOOJ
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27 FILE BIOSIS
4 FILE BIOTECHABS
4 FILE BIOTECHDS
16 FILE BIOTECHNO
1 FILE CABA
19 FILE CAPLUS
15 FILE EMBASE
10 FILE ESBIOBASE
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13 FILE LIFESCI
10 FILE MEDLINE
2 FILE PASCAL
13 FILE SCISEARCH
8 FILE TOXCENTER
9 FILE USPATFULL
2 FILE WPIDS
2 FILE WPINDEX
L4 QUE SPOOJ

FILE 'BIOSIS, CAPLUS' ENTERED AT 12:55:42 ON 24 MAY 2002
L5 97 S SPOIIIE
L6 46 S SPOOJ
L7 3 S L5 AND L6
L8 3 DUP REM L7 (0 DUPLICATES REMOVED)

FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 13:26:26 ON 24 MAY 2002
L9 45878 S REPORTER GENE
L10 317475 S COMPLEMENTA?
L11 2166 S L9 AND L10
L12 822 S L9(P)L10
L13 6401 S SIGMA FACTOR
L14 2900 S SIGMA F
L15 0 S L12 AND L14
L16 400 DUP REM L12 (422 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 13:31:57 ON 24 MAY 2002
E "PROKARYOTE"/CN 25
E "BACTERIUM"/CN 25

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 13:33:15 ON

24 MAY 2002
L17 400 S L16
L18 70987 S SUBTILIS
L19 4 S L17 AND L18
L20 556256 S COMPLEMENT?
L21 3739694 S FUNCTION?
L22 0 S L2O(W)L21
L23 4121 S L20(A)L21
L24 106 S L18 AND L23
L25 46 DUP REM L24 (60 DUPLICATES REMOVED)
L26 36 S L25 NOT PY>1998
L27 38 S L9 AND L23
L28 17 DUP REM L27 (21 DUPLICATES REMOVED)
L29 9901 S L20(3A)L21
L30 137 S SPOIIIE?
L31 0 S L29 AND L30
L32 56 S SPOOJ
L33 0 S L29 AND L32
L34 20 S SPOIII
L35 458251 S ANTIBIOTIC?
L36 2 S L32 AND L35
L37 316 S DIVIB OR FTSQ
L38 33 S DIVIC
L39 44 S DIVIVA
L40 506 S FTSA
L41 98 S FTSL
L42 84 S MRAR
L43 1544 S FTSZ
L44 284 S PBPB
L45 2209 S L37 OR L38 OR L39 OR L40 OR L41 OR L42 OR L43 OR L44
L46 665 S L45 NOT L43
L47 0 S L46(P)L29
L48 0 S L46 AND L29
L49 0 S L43 AND L29
L50 13781 S GENETIC? COMPLEMENTAT?
L51 15 S L46 AND L50
L52 24 S L43 AND L50
L53 39 S L51 OR L52
L54 29 DUP REM L53 (10 DUPLICATES REMOVED)
L55 190 S L30 OR L32
L56 7 S L55 AND L50
L57 7 DUP REM L56 (0 DUPLICATES REMOVED)

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NEWS 4 Feb 01 DKILIT now produced by FIZ Karlsruhe and has a new update
frequency
NEWS 5 Feb 19 Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 6 Mar 08 Gene Names now available in BIOSIS
NEWS 7 Mar 22 TOXLIT no longer available
NEWS 8 Mar 22 TRCTHERMO no longer available
NEWS 9 Mar 28 US Provisional Priorities searched with P in CA/CAplus
and USPATFULL
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NEWS 18 Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS 19 Jun 03 New e-mail delivery for search results now available
NEWS 20 Jun 10 MEDLINE Reload
NEWS 21 Jun 10 PCTFULL has been reloaded

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=> d lysol
NO L# DEFINED

=> s lysol
L1 50 LYSOL

=> s l1 not py>88
12743598 PY>88
L2 0 L1 NOT PY>88

=> s l1 not py>97
12743598 PY>97
L3 0 L1 NOT PY>97

=> file caplus
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=> s lysol
285 LYSOL
1 LYSOLS
L4 286 LYSOL
(LYSOL OR LYSOLS)

=> s l4 not py>97
21832315 PY>97
L5 3 L4 NOT PY>97

=> d ti so 1-3

L5 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI The collection and commercial preparation of Ceara rubber (Manihot
glaziovii)
SO Tanganyika Territory Dept. Agr., Pamphlet, No. 33, 4 pp.

L5 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Regomyia betae Schiffn. in Tullnerfeld
SO Listy Cukrovar., 51(No. 50), Rozhledy 25

L5 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI The use of aluminum in the manufacture of equipment
SO Metallborse, 17, 985-6,1044-5,1100-1,1157,1213-4,1269,1380-1,1491-2,1547-8
From: Chem. Zentr. 1927, II, 1075-6

=> s antiseptic
7007 ANTISEPTIC
41162 ANTISEPTICS
L6 46435 ANTISEPTIC
(ANTISEPTIC OR ANTISEPTICS)

=> s kill?
L7 98229 KILL?

=> s l6 and l7
L8 1054 L6 AND L7

=> s l8 not py>97
21832315 PY>97
L9 1 L8 NOT PY>97

=> s l8 not py>1997
3930480 PY>1997
L10 984 L8 NOT PY>1997

=> s l4 not py>1997
3930480 PY>1997
L11 280 L4 NOT PY>1997

=> d ti so 1-10

L11 ANSWER 1 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Lipsticks containing sucrose benzoic acid esters and cyclic silicones dispersed in amphoteric polymers
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF

L11 ANSWER 2 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Preliminary assessment of the effect of disinfectants on skin changes in
health service workers
SO Med. Pr. (1995), 46(2), 149-54
CODEN: MEPAAX; ISSN: 0465-5893

L11 ANSWER 3 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Usefulness of repellents in orchard protection against hares
SO J. Fruit Ornamental Plant Res. (1994), 2(2), 49-60
CODEN: JFOREN; ISSN: 1231-0948

L11 ANSWER 4 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Disinfectant toilet detergents
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 5 pp.
CODEN: CNXXEV

L11 ANSWER 5 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Microbial sample processing using a disinfectant for lysis
SO Can. Pat. Appl., 38 pp.
CODEN: CPXXEB

L11 ANSWER 6 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Disinfectants and lysing agents in protocol for release of intracellular
components
SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW

L11 ANSWER 7 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Chemical disinfection to interrupt transfer of rhinovirus type 14 from
environmental surfaces to hands
SO Appl. Environ. Microbiol. (1993), 59(5), 1579-85
CODEN: AEMIDF; ISSN: 0099-2240

L11 ANSWER 8 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Comparison the bactericidal and fungicidal activities of disinfectants against the pathogens isolated from poultrys
SO Zhonghua Minguo Shouyi Xuehui Zazhi (1991), 17(1), 27-35
CODEN: CKSCDN; ISSN: 0253-9179

L11 ANSWER 9 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Impact modified acrylic capstock composition for structural plastics
SO Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW

L11 ANSWER 10 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Hair growth stimulant preparation containing boric acid and resorcinol
SO Fr. Demande, 6 pp.
CODEN: FRXXBL

=> d ti so 250-280

L11 ANSWER 250 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI The Disinfection Value of Sprinkling with Chemicals
SO Centr. Bakt. Parasitenk, I Abt., Ref. (1913), 57, 34-5

L11 ANSWER 251 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI The Disinfection Value of Sprinkling with Chemicals
SO Z. Militararzte, Tokyo (1912), (No. 35)

L11 ANSWER 252 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Safety explosives.

L11 ANSWER 253 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI The Disinfecting Action of Izal
SO Desinfektion (1913), 4, 565-77
From: Chem. Zentr., 1912, I, 1581

L11 ANSWER 254 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI The Determination of the Phenol Coefficient of some Commercial Disinfectants
SO Hyg. Lab. P. H. M. H. Serv., Bull. (1912), 82, 35-74

L11 ANSWER 255 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Cauterization of the Eye with **Lysol** and Potassium Permanganate
SO Klin. Monatsbl. Augenheilk. (1912), 12, 758; also in Zentr. Biochem.
Biophys., 12, 697-8

L11 ANSWER 256 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI In what Concentration does Alcohol Alone, or in Combination with Other
Disinfectants, Kill Pus-forming Organisms?
SO Seifensieder Ztg. (1912), 39, 790

L11 ANSWER 257 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI In what Concentration does Alcohol Alone, or in Combination with Other
Disinfectants, Kill Pus-forming Organisms?
SO Z. Hyg. (1912), 70, 225

L11 ANSWER 258 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Mortar.

L11 ANSWER 259 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI A Simple Method for Determining the Mineral Content and Hardness of Water
SO Munch. med. Wochschr. (1912), 58, 2611-3

L11 ANSWER 260 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI The Antiseptic "Microsol"
SO Bull. soc. encour. ind. nat. (1911), 115, 613-27

L11 ANSWER 261 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Quantitative Determination of Phenols in the Human Organs in a Case of
Lysol Poisoning
SO Schweiz Wochschr. (1911), 49, 121-2

L11 ANSWER 262 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Annual Report of the Chem. Untersuchungsamt Der Stadt Breslau, April 1,
1909 to March 31, 1910
SO Chem.-Ztg. (1911), 35, 53

L11 ANSWER 263 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Practical Helps for the Manufacture of Disinfectant Soaps
SO Seifensieder Ztg. (1911), 36, 1437-9,1500-1,1523-5

L11 ANSWER 264 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI An Experimental Contribution on the Chemical Disinfection of Sputum
Containing Tubercular Bacilli
SO Arch. Hyg. (1909), 71, 87-123

L11 ANSWER 265 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Bactericidal Action of Hydrogen Peroxide
SO Z. Hyg. (1909), 63, 319-42

L11 ANSWER 266 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Comparative Tests of the Disinfecting Action of **Lysol**, Liquor Cresoli Saponatus and Several Newer Disinfectants of Similar Composition
SO Disinfection (1909), 1, 267
From: Chem. Zentr., 1909, 1, 206

L11 ANSWER 267 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Two New Formaldehyde Soap Preparations
SO Disinfektion (1909), 1, 12
From: Chem. Zentr., 1908, II, 968

L11 ANSWER 268 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Diphenyloxalester, Phenol in Stable Tablet Form with Increased Disinfecting Properties
SO Hyg. Zentr. (1909), 4, 201
From: Chem. Zentr., 1908, II, 969, 1949

L11 ANSWER 269 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI **Lysol** and Carbol Tablets and the Applicability of the Raschig Method to the Determination of m-Cresol in Cresol Tablets
SO Ber. pharm, Ges. (1909), 18, 421-30

L11 ANSWER 270 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Cresol Soap
SO Pharm.-Ztg. (1909), 53, 817,921

L11 ANSWER 271 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI The Disinfective Value of the Three Cresol Isomers in a Soap Mixture
SO Arch. Hyg. (1909), 67, 1-34

L11 ANSWER 272 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Cresol Excretion in the Dog after **Lysol** Administration
SO Berlin. Therap. Monatsh. (1908), 22, 366-7

L11 ANSWER 273 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI On the Antiseptic Value of the New Cresol Soaps of the Ministerial Decree
of Oct. 19, 1907
SO Untersuchungsamt, Stadt Berlin. Berl. klin. Wochschr. (1908), 45, 778-80

L11 ANSWER 274 OF 280 CAPLUS COPYRIGHT 2002 ACS

TI Toxicological Comparison between Chinosol, **Lysol**, and Cresol
SO Chem.-Ztg. (1908), 32, 23

L11 ANSWER 275 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Toxicological Comparison between Chinosol, **Lysol** and Cresol
SO Vierteljschr. ger. Med. [3] (1907), 34, 1-13

L11 ANSWER 276 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Experiments Concerning the Chemistry of Cresol-poisoning
SO Biochem. Z. (1908), 7, 39-44

L11 ANSWER 277 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Urine Coloration after **Lysol** Poisoning
SO Beitr. Chem. Physiol. (Hofmeister) (1907), 10, 251-52

L11 ANSWER 278 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Remarks and Explanations Relating to Wandel's Paper on the Pathology of
Lysol and Cresol Poisoning
SO Arch. exp. Path. Pharm. (1907), 56, 416-19

L11 ANSWER 279 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI **Lysol** and Cresol Poisoning
SO Arch. Exp. Pathol. and Pharmakol. (1907), 56, 161-86

L11 ANSWER 280 OF 280 CAPLUS COPYRIGHT 2002 ACS
TI Mouth Disinfection in the Prophylaxis and Treatment of Pneumonia
SO J. Inject. Dis. (1907), 3, 774,97

=> s lysol/ti
L12 31 LYSOL/TI

=> d ti so 1-31

L12 ANSWER 1 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Spectrophotometric estimation of cresol in cresol with soap solution I.P.
(**lysol**)
SO Indian J. Pharm. Sci. (1978), 40(4), 135-6
CODEN: IJSIDW

L12 ANSWER 2 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Encyclopedia of explosives and related items. Volume 7. Hydrogen to
lysol
SO U. S. NTIS, AD Rep. (1975), AD-A019502, 636 pp. Avail.: NTIS
From: Gov. Rep. Announce. Index (U. S.) 1976, 76(5), 200
CODEN: XADRCH

L12 ANSWER 3 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Disinfectants for use in tuberculosis institutions. I. Tuberculocidal effect of the Bulgarian disinfectants Veraform, Khlorin, **Lysol**, Manusterol B, and a combination of Perhydrol and liquid Sinpro
SO Epidemiol., Mikrobiol. Infek. Bolesti (1974), 11(1), 63-8
CODEN: EMIBA3

L12 ANSWER 4 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Fungistatic and fungicidal action of phenol, **lysol**, and formaldehyde on Coccidioides immitis 7/86, Histoplasma capsulatum 6652,
and Blastomyces dermatitidis 6064
SO Zh. Mikrobiol., Epidemiol. Immunobiol. (1969), 46(1), 145-9
CODEN: ZMEIAV

L12 ANSWER 5 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI A substitute for **Lysol**
SO Pharm. J. (1953), 170, 59-60

L12 ANSWER 6 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Gross amino-aciduria following a **Lysol** burn
SO Lancet (1952), 262, 190-2

L12 ANSWER 7 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Colorimetric evaluation of cresol in liquor cresolis saponatus or **lysol**
SO J. Proc. Inst. Chemists (India) (1950), 22, 58-64

L12 ANSWER 8 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Concentrations and time limits of **Lysol** dips. Report of the Research Committee, West Virginia Gladiolus Society
SO et al. Gladiolus Suppl. (1942), 6(No. 1), 10-12

L12 ANSWER 9 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Variation in the bactericidal value of **Lysol**, B. P.
SO Pharm. J. (1942), 148, 112

L12 ANSWER 10 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Preparation of **lysol**
SO Quart. J. Pharm. Pharmacol. (1938), 11, 538-42

L12 ANSWER 11 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Blood sugar, rest nitrogen and bilirubin in **lysol** poisoning
SO Wiener klin. Wochschr. (1932), 45, 1252-4

L12 ANSWER 12 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Corrosion of **lysol** containers
SO Chemist and Druggist (1932), 116, 6

L12 ANSWER 13 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Poisoning with apial, **lysol**, meta tablets, carbide, carbon monoxide and green oil
SO Nederland. Tijdschr. Geneeskunde (1931), 75, II, 2453-6

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TI Pale cresylic acid and **lysol**
SO Quart. J. Pharm. Pharmacol. (1931), 4, 373-8

L12 ANSWER 15 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI The condition of the blood from the qualitative point of view in carbon
monoxide, **lysol** and aniline oil poisoning
SO Zentr. Gewerbehyg. Unfallverhut. (1927), 14, 225-8
From: Chem. Zentr. 1927, II, 1732

L12 ANSWER 16 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI **Lysol**
SO Pharm. J. (1926), 116, 409

L12 ANSWER 17 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI **Lysol**
SO Pharm. Conference, Australasian Assoc. Adv. Sci. (1924) 7 pp.

L12 ANSWER 18 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Analysis of **lysol**
SO J. Soc. Chem. Ind. (1924), 43, 93-6

L12 ANSWER 19 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Approximate estimation of commercial cresol in **lysol**
SO Analyst (1921), 46, 451

L12 ANSWER 20 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI The approximate estimation of commercial cresol in **lysol**
SO Pharm. J. (1921), 106, 479-80

L12 ANSWER 21 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Note on the detection of .beta.-naphthol in **lysol** and similar preparations
SO Analyst (1915), 40, 341-3

L12 ANSWER 22 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Cauterization of the Eye with **Lysol** and Potassium Permanganate
SO Klin. Monatsbl. Augenheilk. (1912), 12, 758; also in Zentr. Biochem.
Biophys., 12, 697-8

L12 ANSWER 23 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Quantitative Determination of Phenols in the Human Organs in a

Case of
Lysol Poisoning
SO Schweiz Wochschr. (1911), 49, 121-2

L12 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Comparative Tests of the Disinfecting Action of **Lysol**, Liquor Cresoli Saponatus and Several Newer Disinfectants of Similar Composition
SO Disinfection (1909), 1, 267
From: Chem. Zentr., 1909, 1, 206

L12 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI **Lysol** and Carbol Tablets and the Applicability of the Raschig Method to the Determination of m-Cresol in Cresol Tablets
SO Ber. pharm, Ges. (1909), 18, 421-30

L12 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Cresol Excretion in the Dog after **Lysol** Administration
SO Berlin. Therap. Monatsh. (1908), 22, 366-7

L12 ANSWER 27 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Toxicological Comparison between Chinosol, **Lysol**, and Cresol
SO Chem.-Ztg. (1908), 32, 23

L12 ANSWER 28 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Toxicological Comparison between Chinosol, **Lysol** and Cresol
SO Vierteljschr. ger. Med. [3] (1907), 34, 1-13

L12 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Urine Coloration after **Lysol** Poisoning
SO Beitr. Chem. Physiol. (Hofmeister) (1907), 10, 251-52

L12 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Remarks and Explanations Relating to Wandel's Paper on the Pathology of
Lysol and Cresol Poisoning
SO Arch. exp. Path. Pharm. (1907), 56, 416-19

L12 ANSWER 31 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI **Lysol** and Cresol Poisoning
SO Arch. Exp. Pathol. and Pharmakol. (1907), 56, 161-86

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L12 ANSWER 16 OF 31 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1926:20968 CAPLUS
DOCUMENT NUMBER: 20:20968
ORIGINAL REFERENCE NO.: 20:2563e
TITLE: **Lysol**
AUTHOR(S): Knight, W.
SOURCE: Pharm. J. (1926), 116, 409
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB To obviate the laborious Brit. Pharm. Codex method for making lysol, put
into a 500 cc. bottle KOH 25.5 g. and H2O 30 cc.; when dissolved add
industrial alc. 15 cc., linseed oil 113.6 g., shake and set aside for 1
day. To the soap thus completely formed, add glycerol 28.4 g., H2O to
make 227.2 g., then add cresol 227.2 g., shake and allow to stand for 1
day. A clear, amber-colored liquid results.

=> s ld 50
11886 LD
2061 LDS
13651 LD
(LD OR LDS)
1599846 50
L13 264 LD 50
(LD(W)50)

=> s disinfect?
L14 73636 DISINFECT?

=> d his

(FILE 'HOME' ENTERED AT 16:02:22 ON 25 JUN 2002)

FILE 'MEDLINE' ENTERED AT 16:02:36 ON 25 JUN 2002
L1 50 S LYSOL
L2 0 S L1 NOT PY>88
L3 0 S L1 NOT PY>97

FILE 'CAPLUS' ENTERED AT 16:04:30 ON 25 JUN 2002
L4 286 S LYSOL
L5 3 S L4 NOT PY>97
L6 46435 S ANTISEPTIC
L7 98229 S KILL?
L8 1054 S L6 AND L7
L9 1 S L8 NOT PY>97
L10 984 S L8 NOT PY>1997
L11 280 S L4 NOT PY>1997
L12 31 S LYSOL/TI
L13 264 S LD 50
L14 73636 S DISINFECT?

=> log y

COST IN U.S. DOLLARS	ENTRY	SINCE FILE SESSION	TOTAL
FULL ESTIMATED COST		97.40	98.75

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

	ENTRY	SINCE FILE SESSION	TOTAL
CA SUBSCRIBER PRICE		-0.62	-0.62

STN INTERNATIONAL LOGOFF AT 16:13:11 ON 25 JUN 2002